# SUPPLEMENT TO

# LANGUAGE

## JOURNAL OF THE LINGUISTIC SOCIETY OF AMERICA

LANGUAGE DISSERTATION NO. 41

## AN OUTLINE OF HAUSA GRAMMAR

BY

CARLETON TAYLOR HODGE

UNIVERSITY OF PENNSYLVANIA DISSERTATION

# LINGUISTIC SOCIETY OF AMERICA

FOUNDED 1924 FOR THE ADVANCEMENT OF THE SCIENTIFIC STUDY
OF LANGUAGE; INCORPORATED 1940 IN THE DISTRICT OF COLUMBIA

## OFFICERS AND COMMITTEES FOR 1947

*President,* ALBRECHT GOETZE, Yale University
*Vice-President,* MYLES DILLON, University of Edinburgh
*Secretary and Treasurer,* J M. COWAN, Cornell University
*Executive Committee,* the preceding and
　Serving through 1947: ZELLIG S. HARRIS, University of Pennsylvania
　Serving through 1947: KENNETH L. PIKE, Summer Institute of Linguistics
　Serving through 1948: OTTO SPRINGER, University of Pennsylvania
　Serving through 1948: NORMAN A. McQUOWN, University of Chicago
*Committee on Publications*
　Chairman and Editor: BERNARD BLOCH, Yale University
　Serving through 1947: ROBERT A. HALL JR., Cornell University
　Serving through 1948: M. B. EMENEAU, University of California
　Serving through 1949: ALBERT C. BAUGH, University of Pennsylvania
*Nominating Committee*
　Serving through 1947: HARRY HOIJER, University of California at Los Angeles
　Serving through 1948: EINAR HAUGEN, University of Wisconsin
　Serving through 1949: CHARLES C. FRIES, University of Michigan
*Standing Committee on Research*
　Serving to Feb. 1, 1948: GEORGE S. LANE, University of North Carolina
　Serving to Feb. 1, 1949: HANS KURATH, University of Michigan
　Serving to Feb. 1, 1950: H. M. HOENIGSWALD, University of Texas
*Administrative Committee of the Linguistic Institute*
　Director: HANS KURATH, University of Michigan
　Associate Director: EDGAR H. STURTEVANT, Yale University
　Assistant Director: JOSEPH K. YAMAGIWA, University of Michigan
　CHARLES C. FRIES, University of Michigan
　HAYWARD KENISTON, University of Michigan
　W. FREEMAN TWADDELL, Brown University
*Delegates to the American Council of Learned Societies*
　Serving through 1948: EDGAR H. STURTEVANT, Yale University
　Serving through 1950: W. FREEMAN TWADDELL, Brown University
*Delegate to the American Association for the Advancement of Science*
　Serving through 1948: JOHN KEPKE, Brooklyn, N. Y.
*Delegate to the American Documentation Institute*
　EDWARD H. SEHRT, George Washington University
*Delegate to the Mexican Council for Indigenous Languages*
　NORMAN A. McQUOWN, University of Chicago
*Councillor of the Inter-American Society of Anthropology and Geography*
　J M. COWAN, Cornell University

---

LANGUAGE DISSERTATION NO. 41

## AN OUTLINE OF
## HAUSA GRAMMAR

BY

CARLETON TAYLOR HODGE

UNIVERSITY OF PENNSYLVANIA DISSERTATION

# PREFACE

The following description is based upon the speech of Mr. John Frank (Abdu Hassan) of New York City. Mr. Frank is a native of Katsina province in Northern Nigeria. The numerous grammars and collections of texts are, as far as I have examined them, of other dialects, stressing that of Kano. They have occasionally been used as guides for the interpretation of material elicited from Mr. Frank. The dictionaries note Katsina forms but have not been used as sources. The dictionary of Rev. G. P. Bargery (G. P. Bargery, A Hausa-English Dictionary and English-Hausa Vocabulary, London, 1934) has been extensively referred to, and quotations from it are noted with (BD).

I am indebted to the American Council of Learned Societies, whose generous grants have enabled me to undertake and publish this work. I also wish to express my gratitude to Professor Z. S. Harris for his constant advice and constructive criticism. My thanks are also due to Miss Helen E. Hause, whose musical training has been of inestimable aid in the problems of tone and vowel length.

## ABBREVIATIONS

| | |
|---|---|
| BD | G. P. Bargery, A Hausa-English Dictionary and English-Hausa Vocabulary, London, 1934 |
| GHL | F. W. H. Migeod, A Grammar of the Hausa Language, London, 1914 |
| HD | C. H. Robinson, Hausa Dictionary, Vol. I, Cambridge, 1899 (Fourth edition, 2 vols., Cambridge, 1925) |
| HG | C. H. Robinson, Hausa Grammar, Fifth edition 1925, reprinted London, 1942 |
| HT | C. T. Hodge and H. E. Hause, 'Hausa Tone', Journal of the American Oriental Society 64 (1944), pp. 51, 52. |
| ISH | R. C. Abraham, An Introduction to Spoken Hausa and Hausa Reader for European Students, 1940 |
| LH | A. Mischlich, Lehrbuch der Hausasprache, Berlin, 1902 |
| MA | C. T. Hodge, 'Morpheme Alternants and the Noun Phrase in Hausa', Language 21 (1945), pp. 87–91 |
| MGSH | R. C. Abraham, A Modern Grammar of Spoken Hausa, 1941 |
| NPH | A. L. James and G. P. Bargery, 'A Note on the Pronunciation of Hausa', Bulletin of the School of Oriental Studies, London, Vol. 3 (1925), pp. 721–728 |
| PH | R. C. Abraham, Principles of Hausa, Kaduna, 1934 |
| PHP | J. H. Greenberg, 'Some Problems in Hausa Phonology', Language 17 (1941), pp. 316–323 |
| SH | Carl Meinhof, Die Sprachen der Hamiten, Hamburg, 1912 |
| WHS | A. Mischlich, Woerterbuch der Hausasprache, 1906 |

# TABLE OF CONTENTS

# PHONOLOGY

**1.1. Phonemes.** Hausa has the following phonemes:[1]

Consonants:

| | |
|---|---|
| Voiceless | (p) t k f h s c š ? |
| Voiceless glottalized | k? s? c? |
| Voiced | b d g     z j m n ɽ r l |
| Voiced glottalized | b? d? |
| Semivowels | w y |
| Vowels: | i e u o a |
| Tones: [2] | high ′ low ‵ |
| Junctures: | close (no special marker) open / ⚹ / tone phrase // |

**1.2. Stops**

**1.2.1.** /t/ voiceless aspirated dental stop

  *taagàà* [⁵t‘ɑ::¹gʌ:] 'window'

  /d/ voiced dental stop

  *dafìì* [⁵dɛ:¹hi:] 'poison'

  /d?/ voiced glottalized dental stop

  *d?aa* [⁵d?a:] 'child, son'

  /b/ bilabial voiced stop

  *bangoo* [⁵bɑ·ŋgʷo:] 'wall of a house'

  /b?/ bilabial glottalized voiced stop

  *b?aawaa* [⁵b?a::wa:] 'bark of a tree'

**1.2.2. Labialization before /u/, /oo/.** /b, b?, k, k?, g/ are [bʷ, b?ʷ, kʷ, k?ʷ, gʷ] before /u/, /oo/. This labialization is not uniformly regular but sometimes varies considerably in the same morpheme. It does not occur before /uu/.

E.g. *?àbookii* [¹?a·⁵bʷo::ḵi:] 'friend'. *b?ootàà* [⁵b?ʷoo::¹t‘a:] 'handle'. *?àbùtaa* 'friendship' [¹?a·bʷʋ·⁵t‘a:]. *kusa* [⁵kʷʋ:sa·] 'near'. *koomii* [⁵kʷo::mi·] 'anything'. *k?udaa* [⁵k?ʷʋ:da·] 'fly'. *k?ook?ìì* [⁵k?ʷo::¹k?i:] 'a kind of insect'. *gusùn* [⁵gʷʋ·¹sʋŋ] 'South'. *gòògee* [¹gʷo:·⁵ĝe:] 'a string instrument'.

**1.2.3. Palatalization before /i, e, y/.** /k/ and /g/ are [ḵ, ĝ] (i.e. slightly palatalized) before /i, e, y/.[3]

E.g. *kimbaa* [⁵ḵɪ:mba:] 'black pepper'. *kiifii* [⁵ḵi::hi:] 'fish'. *kèèkee* [¹ḵe:·⁵ḵe:] 'cart'. *kyànkyasòò* [¹ḵyɛŋ⁵ḵyɛ·¹so:] 'roach'. *giširìì* [⁵ĝɪ:šɪ:ɾi:] 'salt'. *giiwaa* [⁵ĝi::wa:] 'elephant'. *geemìì* [⁵ĝe::¹mi:] 'goatee'. *gyaaraa* [⁵ĝyɛ::ɾa:] 'shaving, fixing'.

---

[1] Compare BD xxi–xxiv, NPH, PHP.

[2] High tone is unmarked in phonemic writing, the sign ′ being used only in giving tone in formulae.

[3] This palatalization is a more front position of the consonant but has no strong offglide as does the speech described by others (HD xix, xx, BD xxii [n. 5], MGSH 4, PHP, NPH 723).

1.2.4. In all other positions /k, k?, g/ are as follows:

/k/ [kʻ] voiceless aspirated velar stop.

E.g. *kaỳ* [⁵kʻɑ·¹ʸi] 'head'.   *kay* [⁵kʻɑ·y] 'you (m.)'.   *kààmaa* [¹kʻɑ·:⁵mɑ·:] 'a roast'. *kuusùù* [⁵kʻu·:¹su:] 'rat'.

/k?/ [k?] voiceless glottalized velar stop.

E.g. *k?afàà* [⁵k?ɑ·:¹hʷɑ:] 'foot'.   *lèèk?ee* [¹le·:⁵k?e·:] 'peering' (noun).   *k?uugùù* [⁵k?u·:¹gu:] 'lower part of back'.

/g/ [g] voiced velar stop.

E.g. *gàngaa* [¹gɑŋ⁵gɑ·:] 'drum'.   *gùùluulùù* [¹gu·:⁵lu·:¹lu:] 'lump of clay on spindle as balance'.

1.2.5. /?/ [?] glottal stop.

E.g. *?àfoo* [¹?ɑ·⁵ho·:] 'garlic'.   *šàṛii?àà* [¹še·⁵ṛi·:¹?ɑ:] 'court, law'.   *màyfaṛ?àà* [¹mɑy⁵hʷɒṛ¹?ɑ:] 'a jolly person'.

1.3. Glottalized consonants.

Stops. /b, d, k/ have glottalized counterparts /b?, d?, k?/.[4] Phonetically these latter phonemes are the corresponding stops interrupted by a glottal stop, then released, followed by the release of the glottal stop.   Using vvvv for voicing, / for release, ..... for the stops, and ------- for the glottal stop, we have:

/b?, d?/         --------/          /k?/          -------/
        ......../                          ....../
        vvvv

The effect of glottalization is seen not only in the cessation of voicing but also in the nature of the release.   In /b?/ the lips are snapped vertically apart, with no aspiration whatsoever.   /d?/ has a similar release.   In /k?/ the release of the [k] is very light.

Spirants. /s, c/ have glottalized counterparts /s?, c?/.   In the latter [s] and [č] cease on the onset of [?].

That the glottalized series are separate phonemes need not be discussed here except in regard to their being unit phonemes, not clusters of consonant plus glottal stop.   Beside the phonetic unity, which is not necessarily conclusive, we have the criterion of vowel length, as well as the patterning of consonants (distribution).   The glottalized series act as single consonants in that a preceding vowel in the same morpheme has the same length as it would were the corresponding simple stop there (see 1.9).

E.g. *bàdkii* [¹bɑ·:⁵ki:] 'mouth'.   *bààk?ii* [¹bɑ·:⁵k?i:] 'strangers'.   Secondly, there are no initial clusters of stop plus stop, or stop plus stop plus semivowel.   These would be foreign to the whole syllabic pattern of the language.   The initial clusters which do occur have semivowels (w, y) as second members of the clusters (1.14.3).   Compare:

*k?yàlk?yàlii* [¹k?yɛl'k?yɛ·⁵]i·:] 'a glittering'

*kyànkyasòò* [¹kyɛŋ⁵kyɛ·¹so:] 'roach'.

1.4. Spirants and affricates /f, s, s?, z, c, c?, j, š, h/.

/f/ This phoneme has a wide phonetic range.   For alternation with /h/ see 2.2.6.

---

[4] Compare particularly NPH 723, 724.

[ɸ] or [hʷ] before /a/ or single /u/.

E.g. *farii* [⁵hʷʌɾi:·] 'a white one'. *fòòɾaa* [¹hʷɑ:·⁵ɾɑ:·] 'locusts'. *fušii* [⁵hʷʋːši:·] 'anger'. *fukumcìì* [⁵ɸʋ:kʋ·m¹či:] 'rule'.

[h] before /i, e, o/ and /uu/.

E.g. *fiffikèè* [⁵hɩ·h·ɩ·¹ke:] 'wing'. *kʔarfii* [⁵kʔɑ·ꜰ·hi:·] 'strength'. *kʔarfèè* [⁵kʔɑ·ꜰ¹¹he:] 'iron'. *fòòtoo* [¹ho:·⁵tʻo:·] 'picture'. *fùùlaa* [¹hu:·⁵l̩ɑ:·] 'hat'.

[f], a sound very similar to English *f*, is a rarer variant before any vowel. It is partly free.

E.g. *wòòfii* [¹wo:·⁵hi:·] or [¹wo:·⁵fi:·] 'a foolish one'. *fùùfuu* [¹fu:·⁵fu:·] 'lungs'. *fàllasòò* [¹fʌl̩·⁵ɛ:¹sʌ:·] 'Reveal a person's secrets and expose him to ridicule or punishment' (BD). *fòòtoo* [¹fo:·⁵tʻo:·] 'picture'.

[b̥], [p] or [f] before voiceless consonant or / ⚹ /.

E.g. *tàfšee* [¹tʻɑp⁵še:·], [¹tʻɑb̥⁵še:·] or [¹tʻɑf⁵še:·] 'squash soup'. *ʔalìf* [⁵ʔɑ:¹lɩp] or [⁵ʔɑ:¹lɩf] 'thousand'.

[pʻ] is a rare variant in syllabic initial, found regularly in a few words and sporadically in others.[5]

E.g. *pilpilòò* [⁵pʻɩ·l¹pʻɩ:¹lo:] 'butterfly'. *paawàà* [⁵pʻɑ:·¹wɑ:] 'butcher's trade'. *pàmpam* [¹pʻɑm⁵pʻɑ·m] 'that's all'.

/s/ voiceless dental spirant [s].

E.g. *sallà* [⁵sɑ·l·¹ɑ] 'prayer'. *sìrììkʔìì* [¹sɩ·⁵ꜰi:·¹kʔi:] 'a flute'.

/sʔ/ [sʔ] glottalized dental spirant.

E.g. *sʔakà* [⁵sʔʌ:¹kʻɑ] 'middle'. *sʔoofoo* [⁵sʔo::ho:·] 'an old one'.

/z/ [z] voiced dental spirant.

E.g. *zanìì* [⁵zɛ:¹ni:] 'a type of woman's dress'. *ziinaarìyàà* [⁵zi::nɑ:·¹ꜰi·yɑ:] 'gold'.

/c/ [c] voiceless dental affricate.

E.g. *caacaa* [⁵čɑ::čɑ:·] 'gambling'. *cinyà* [⁵čɩ·ŋ¹yɛ] 'thigh, hip'.

/cʔ/ [čʔ] glottalized voiceless dental affricate.

E.g. *cʔààdaa* [¹cʔɑ:·⁵dɑ:·] 'expensiveness'.

/j/ voiced palatal affricate. This is the voiced counterpart of both /c/ and /š/ and is neither [ǯ] nor [ž], though closer to the former: [ž].

E.g. *jaa* [⁵žɑ:·] 'a red one'. *jirgii* [⁵žɩꜰ·ĝi:·] 'boat'.

/š/ [š] voiceless dental spirant.

E.g. *šaafòò* [⁵šɑ::¹ho:] 'hawk'. *šìnkaafaa* [¹šɩŋ⁵kʻɑ::hʷɑ:·] 'rice'.

/h/ [h] spirant. This is a defective phoneme, occurring only before /a/ (in contrast to /f/ [hʷ]). Before all other vowels [h] is /f/.

E.g. *halii* [⁵hɑ:l̩i:·] 'mind'. *halšèè* [⁵hɑ·:l̩¹še:] 'tongue'.

1.5. Nasals /m/ and /n/.

/m/ bilabial voiced nasal.

[~ᵐ] or [m] before / ⚹ /. As the first transcription indicates, it is sometimes very lightly pronounced with nasalization of the preceding vowel. It is normally unreleased.

E.g. *mùtum* [¹mʋ·⁵tʻʋ·m], [¹mʋ·⁵tʻṽ·ᵐ] 'person'. *jààɾum* [¹žɑ:·⁵ɾʋ·m] 'jail'. In the

---

[5] Compare NPH 725, PH 3, HG 178, 179, MGSH 3, WHS x, xi. On another analysis, perhaps preferable, /p/ and /f/ would be separate phonemes. /p/ would be a defective phoneme, occurring only before vowels. Certain morphemes would have alternants with /p/ and /f/ as optional or limited variants.

following word it has loose contact, usually with an anaptyctic vowel (only example noted before /j/): *gamjìì* [⁵gʌ·mᵉ¹ži:], [⁵gʌ·m¹ži:] 'gutta percha tree'.

Elsewhere it is [m].

E.g. *k²àzamtàà* [¹k²ɑ·⁵zɑ·m¹t'ɑ:] 'nastiness'. *tùmbii* [¹t'ʋm⁵bi:·] 'stomach (as organ)'. *dumb²uu* [⁵dʋ·mb²u:·] 'a worn out tool'. *lumsaašii* [⁵ḷʋ·msɑ:ši:·] 'alternate breaking and closing (as of the lips in smiling or the sun appearing and disappearing in clouds)'. *damšii* [⁵dɑ·mši:·] 'dampness'. *damc²èè* [⁵dɑ·m¹c²e:] 'upper arm'. *k²àmnaa* [¹k²ɑm⁵nɑ:·] 'loving'. *zumwàà* [⁵zʋ·m¹wɑ:] 'honey'. *gwamroo* [⁵gwɑ·mɾo:·] 'previously married but now wifeless man'.

/n/ dental voiced nasal.

[ŋ] before /k, k², g, ², h, w, y/, [φ, hʷ, h] (as variants of /f/).

E.g. *šinkaafaa* [¹šɪŋ⁵k'ɑ::hʷɑ:·] 'rice'. *k²ànk²annèè* [¹k²ɑŋ⁵k²ɑ·n·¹e:] 'a small one'. *šingee* [⁵šɪ·ŋĝe:·] 'a farm fence'. *wan²ìn* [wɑ·ʸŋ¹²ɪŋ] 'that'. *²idònhaguu* [⁵²ɪ·³do·ŋ⁴hɑ·gu:·] 'left eye'. *kanwaa* [⁵k'ɑ·ŋwɑ:·] 'potash, soda'. *cinyà* [⁵čɪ·ŋ¹yε] 'thigh'. *²ànfààdnii* [¹²ɑŋhʷɑ:·⁵ni:·] 'usefulness'. *sanfòò* [⁵sɑ·ŋ¹ho:·] 'basket made of woven palm leaves'.

[ŋ], [n], or [ʔⁿ] before / # /.

E.g. *sàttin* [¹sʌt·'⁵ɪŋ] 'sixty'. *wannàn* [⁵wɑ·n·¹ɑ̃ⁿ] 'this'. *²àlkùr²an* [¹²ɑlk'ʋɾ⁵²ɑn], more commonly [¹²ɑlk'ʋɾ⁵²ɑŋ] 'Koran'.

[ˀ] before /ṛ, r, l/, apparently with lengthening of the following consonant.

E.g. *naamànṛàk²umii* [⁵nɑ:·³mɑ̃ṛ·ɑ·⁴k²u·mi:·] 'camel meat'. *²yanrààfii* [⁵²yɛ̃·³ṛ·ɑ:·⁴hi:·] 'irrigation workers' (lit. 'children of irrigated farmland'). *maagàninràyray* [⁵mɑ:·³gʌ·⁴nĩ·²ṛ·ɑy³ṛɑ·y] 'remedy for sand'. *ganinrààmakkà* [⁵gʌ·nĩ·³ṛ·ɑ:·⁴mʌ·k·'¹ʌ] 'the seeing of your emaciated condition'. *²yanlàmbuu* [⁵²yɛ̃·ḷ·³ɑm⁴bu:·] 'irrigation workers' (lit. 'children of irrigating').

Should the nasalization be absent, this would be a replacement of /n/ by the consonant following.

[n] elsewhere.

E.g. *²antàà* [⁵²ɑ·n¹t'ɑ:] 'liver'. *bùnsuruu* [¹bʷʋn⁵sʋ·ɾu:·] 'billy goat'. *s²uns²uu* [⁵s²u·ns²u:·] 'bird'. *hancìì* [⁵hɑ·n¹čɪ:] 'nose'. *hanjii* [⁵hɑ·nži:·] 'intestines'. *banzaa* [⁵bɑ·nzɑ:·] 'foolish thing'. *niisaa* [⁵ni::sɑ:·] 'far off'.

1.6. Laterals /ṛ, r, l/.

1.6.1. /ṛ, r/. Hausa has two r's: [r], which is trilled (two or more tongue tip flaps) and [ɾ], a flap r with tongue forward, giving an "l" effect, especially before front vowels.[6]   That the two are different phonemes is shown by the pair:

*kuurààyee* [⁵k'u::³ɾɑ:·⁴ʸe:·] 'hyaenas' (sg. *kuuraa*)

*kuuṛààyee* [⁵k'u::³ṛɑ:·⁴ʸe:·] 'cone-shaped drums' (sg. *kuuṛùù*)

The pair used by Bargery and Abraham is:[7]

*baràà* [⁵bʌ:¹ɾɑ:] 'servant'

*baṛàà* [⁵bʌ:¹ṛɑ:] 'begging'

Other examples of the two are:

/ṛ/ *muṛàà* [⁵mʋ·¹ṛɑ:] 'head cold'. *fàṛawtàà* [¹hʷɒ·⁵ṛɑ·w¹t'ɑ:] 'hunting'. *kuṛnàà* [⁵kʷʋ·ṛ¹nɑ:] 'a cultivated tree'.

---

[6] Compare HG 8, *l* and *r*.   See also SH 58 fn. 1, NPH 725, MGSH 3, 4.

[7] BD xxii (n. 8), see other examples given there also; PH 4, MGSH 4.

/r/ *kuràadaa* [⁵kʷʋ·³ɾɑ·⁴dɑ:·] 'a hatchet to cut hay'. *cˀiròò* [⁵cˀɩ·¹ɾo:·] 'sprouting'. *bìrìì* [⁵bɩ·¹ɾi:] 'monkey'. *rììgaa* [¹ɾi:·⁵gɑ:·] 'type of clothing'.

1.6.2. /l/. [l], a more frontal *l* than in English.

E.g. *ˀàladèè* [¹ˀɑ·⁵le·¹de:] 'pig'. *laakaa* [⁵l̥ɑ::kˀɑ:·] 'mud'. *lèèfee* [¹l̥e:·⁵he:·] 'a basket for ginned cotton'. *luuyàà* [⁵l̥u::¹yɑ:] 'lawyer'.

1.6.3. Anaptyxis with laterals.

In clusters of /rC/ and /lC/ the contact between the lateral and the following consonant is loose, and there is a very short non-phonemic vowel. The quality of this vowel is determined by phonetic context. Using the symbol R for 'lateral', we have the following formulae:

Rw is [Rᵘw]   Ry is [Rⁱy]   RCi and RCe are [R·Ci] and [R·Ce]

Elsewhere V¹RC is [V¹Rᵛ¹C, [ᵛ¹] following the quality of the vowel preceding R. The tone of the anaptyctic vowel is the same as that of the preceding vowel. The quality also varies, usually according to the allophone of the determining phoneme, though anaptyctic [ⁱ] is usually [·] when determined by an [i]. E.g.:

Rw, Ry *kˀišurwaa* [⁵kˀɩ·šʋ·ɾᵘwɑ:·] 'thirst'. *ˀàlwasà* [¹ˀɑlᵘ⁵wʌ·¹sʌ] 'the width of any material as woven' (BD). *kˀwaryaa* [⁵kˀwɑ·ɾⁱyɑ:·] 'large calabash'.

RCi, RCe *zurfii* [⁵zʋ·ɾˈhi:·] 'depth'. *kˀarfèè* [⁵kˀɑ·ɾˈ¹he:] 'iron'. *gulbii* [⁵gʷʋ·l·bi:·] 'river'. *falkèè* [⁵hʷɑ·l̩·¹¹ke:] 'trader'.

VRC *kurkutu* [⁵kʷʋ·ɾᵘkʷʋ·tˀu·] 'small drum'. *kulbˀàà* [⁵kʷʋ·lᵘ¹bˀɑ:] 'lizard'. *girmaa* [⁵g̊ɩ·ɾⁱmɑ:·] 'largeness, large size'. *bincìlmay* [¹bɩnčɩl·⁵mɑ·y] 'ostriches'. *sarmàyii* [⁵sɛ·ɾ·³mɑ·⁴ʸi:·] 'young man'. *taakalmàà* [⁵tˀɑ::kɑ·l̩·ᵃ¹mɑ:] 'sandals'.[8]

1.7. Semivowels /w, y/

/w/ and /y/ in intervocalic position before or after homorganic vowels are [ʷ] and [ʸ] respectively. This is not a mere glide but a lighter (less audible) pronunciation. This may be seen by a comparison of *maỳ* [⁵mɑ·¹(ʸ)i·] 'grease, butter' with *maayèè* [⁵mɑ::¹ʸe:] 'wizard', although these are not a perfect pair. In *maỳ* the *y* is phonetically a slight glide plus [i·], whereas the *y* in *maayèè* is much stronger. The degree of lightness is not always uniform, but these minutiae are not distinguished in the following examples.[9]

/w/ *saawuu* [⁵sɑ·:ʷu:·] 'footprint'. *ˀàkàawuu* [¹ˀɑ·k·ɑ·:⁵ʷu:·] 'clerk'. *sˀaawoo* [⁵sˀɑ::ʷo:·] 'length'. *cììwòò* [⁵či::¹ʷo:] 'sickness'. *tuwòò* [⁵tˀu·¹ʷo:] 'a thick porridge'. *ˀùnguwaa* [¹ˀʋŋ⁵gu·:ʷɑ:·] 'district'. *tagùwaa* [⁵tˀʌ·¹gu·ʷɑ:·] 'a kind of shirt'. *koowaa* [⁵kʷo::·ʷɑ:·] 'everybody'. *màyroowà* [¹mɑy⁵ɾo::¹ʷɑ] 'stingy person'.

/y/ *makˀìyii* [⁵mʌ·³kˀi·⁴ʸi:·] 'hater'. *makìyààyii* [⁵mʌ·³ki·ʸɑ·:⁴ʸi:·] 'herder'. *sˀunsˀààyee* [⁵sˀu·n³sˀɑ·:⁴ʸe:·] 'birds'. *gaskeeyaa* [⁵gʌ·ske·:ʸɑ:·] 'truth'. *luubìyaa* [⁵l̥u·:³bi·⁴ʸæ:·] 'ripe fruit'. *biyuu* [⁵bi·ʸu:·] 'two'.

Elsewhere /w, y/ are similar to English *w, y*: [w], [y].

E.g. *wani* [⁵wɛ·ni·] 'anyone, someone'. *wàndoo* [¹wan⁵do:·] 'trousers'. *yunwàà* [⁵yʋ·ŋ¹wɑ:] 'hunger'. *yaaròò* [⁵yɑ::¹ɾo:] 'boy'.

---

[8] Stress may fall on an anaptyctic vowel: *ki'rkìì* [⁵kɩ·ɾⁱ¹ki. The length of the vowels (preceding and anaptyctic) is affected and the statement of vowel length would undoubtedly be modified in some details by a careful study of the stress. The presence or absence of the anaptyctic vowel should also be more narrowly defined. It is absent, for example, in *halšèè* 'tongue' (but *kilšì* with anaptyctic vowel).

[9] Compare LH 4 (and fn. 1).

1.8. Sequences of like phonemes.   A sequence of like phonemes is phonetically a long vowel or consonant.   For vowel length see 1.9.   That a sequence of like consonant phonemes is phonetically long, not double (i.e. rearticulated), is clearly seen in the case of /r/, which, if rearticulated, would be the equivalent of a single /ɽ/.   Instead we have a held flap.   E.g. *kʔààrarree* [¹kʔɑːˈ⁵ɽɑˈɾeːˈ] 'a completed thing'.   The glottalized series do not geminate, the first of two being replaced by its non-glottalized equivalent, e.g. /kʔ/ plus /kʔ/ yields /kkʔ/, phonetically [kˈʔ]: *fèèkʔàkkʔuu* [¹heːˈkʔakˈʔ⁵uːˈ] 'sharpened ones'.   Other examples of consonant sequences are: *fiffikèè* [⁵hɪˈhˈɪːˈ¹ke̥ː] 'wing', *ʔiccèè* [⁵ʔɪˈčˈ¹eː] 'tree'.   For further examples see 1.14.4.

1.9. Vowel length.   Phonetically there are five different vowel lengths, conditioned by the tone, structure of the syllable, and the juncture following.   Using /a/ as a type vowel, the conditions are:

| | | | |
|---|---|---|---|
| 1 | CṼC | CV̄ # | [a] |
| 2 | CV̄ | CV̂C   CV̂ # | [aˈ] |
| 3 | CV | CṼṼ # | [aː] |
| 4 | CṼṼ | CV́V́ # | [aːˈ] |
| 5 | CVV | CV́V | [aːː] |

Frequently a glottal stop (non-phonemic) may be heard after a vowel before / # /.   That vowel length is phonemic may be illustrated by the pair:

*tàgùway* [¹tˈʌˈguˈ⁵waˈy] 'a kind of shirt' (pl.)

*tààguway* [¹tˈaːˈguˈ⁵waˈy] 'female camels'.

Since the vowels /e/ and /o/ occur only in geminate clusters /ee/, /oo/ (1.14.1), they may have only lengths 3 to 5.   Examples of vowel length are:

1 [a] in CṼC: *gìndii* [¹ĝɪɲ⁵diˈ] 'hips'; *kùnkuruu* [¹kʷʊŋ⁵kʊːɾuː] 'tortoise'; in CV̄ # : *yaadʔàwkì yaasʔàà* [⁵yɑːˈ³dʔawkɪ ⁴yɑːːˈs ʔɑː] 'he took (his) finger'.

2 [aˈ] in CV̄: *ʔibìliišìì* [¹ʔɪˈbɪˈ⁵liːˈši] 'demon', *ʔùbaa* [¹ʔʋˈ⁵baːˈ] 'father', *kàree* [¹kˈʌ ⁵ɾeːˈ] 'dog'; in CV̂C: *bindigàà* [⁵bɪndɪˈ¹gaː] 'gun', *masukkàà* [⁵mʌːsʋˈkˈˈ¹aː] 'a type of large calabash' (pl.), *ʔantàà* [⁵ʔɑˈnˈtˈaː] 'liver'; in CV̂ # : *nagàri* [⁵nʌˈ³gʌˈ⁴ɾi] 'a person of good character'.

3 [aː] in CV̄: *gizòò* [⁵ĝɪˈ¹zoː] 'spider (folklore trickster)', *kudʔii* [⁵kʷʋːdˈʔiː] 'money', *sagoo* [⁵sʌˈgoː] 'whirlwind'; in CṼṼ # : *ʔaykìì* [⁵ʔɑˈyˈkiː] 'work', *yaabuudʔèè* [⁵yɑːːbuːˈ¹dʔeː] 'it's open', *ʔàlaaɽùù* [¹ʔɑ⁵laːˈˈɽuː] 'porter', *ʔidòò* [⁵ʔɪˈ¹doː] 'eye', *kʔàzamtàà* [¹kʔɑ⁵zɑˈmˈtˈaː] 'nastiness'.

4 [aːˈ] in CṼṼ: *cìicii* [¹čiːˈ⁵čiːˈ] 'anything that bites when you're not looking', *bèèlii* [¹beːˈ⁵liːˈ] 'flute', *tùùsʔuu* [¹tˈuːˈ⁵sʔuːˈ] 'a festival drum', *tòòkaa* [¹tˈoːˈ⁵kˈaːˈ] 'ashes', *màà gee* [¹maːˈ⁵ĝeːˈ] 'cat'; in CV́V # : *fušii* [⁵hʷʋːši] 'anger', *beebee* [⁵beːːbeːˈ] 'deafmute', *rùùgùtuu* [¹ɽuːˈguˈ⁵tˈuːˈ] 'writing', *cèètoo* [¹čeːˈ⁵tˈoːˈ] 'salvation', *ɽaanaa* [⁵ɽɑːˈnɑːˈ] 'sun'.

5 [aːː] in CṼV́: *kiifii* [⁵kiːːhiːˈ] 'fish', *neemaa* [⁵neːːmɑːˈ] 'seek', *dambuubùù* [⁵dɑˈmbuːːˈ¹buː] 'calf of leg', *zoomoo* [⁵zoːːmoːˈ] 'rabbit', *laakaa* [⁵lɑːːkˈaːˈ] 'mud'; in CV́Ṽ: *jìì* [⁵žiˈˈiːː] 'perceiving', *yaaceè* [⁵yɑːːčeˈeːː] 'he said', *soo* [⁵soˈoːː] 'wanting', *saàtàà* [⁵sɑˈaːːtˈaː] 'stealing'.

It should be said that the length of a final vowel is difficult to determine, especially if it has low tone.   Note that according to the above formulation, a

final long vowel with low tone has the same length as a short high in an open syllable.[10]

1.10. Vowel quality.    Length is not marked in the brackets following a given phoneme and giving the quality.

1.10.1. /i/ [i] before /y/, optionally before / ⚹ /, and in /ii/.
    [ɩ] elsewhere

E.g. *wìyaa* [¹wi·⁵ʸɑ·ː] 'difficulty', *wiyàà* [⁵wi·¹ʸɑ·] 'neck', *mùyi hàwkaa* [¹mʊ·⁵ʸi· ³hɑw⁴k'ɑ·ː] 'let's act crazily', *wuri* [⁵wʊːɾɩ·], [⁵wʊːɾi·] 'earliness', *ʔiskàà* [⁵ʔɩ·s¹k'ɑ·] 'wind', *kicʔèè* [⁵k̬ɩ·¹c̬ʔe·] 'fat', *niisaa* [⁵ni·ːsɑ·ː] 'far off', *fiilii* [⁵hi·ːli·ː] 'open space (for public use)'.

1.10.2. /ee/. [eʌ] before / ⚹ /, [e] elsewhere.    E.g. *kay sanfòònee* [⁵k'ɑ·y sa·ŋ³ho·ː⁴neʌ·ː] 'you're a palm-leaf basket' (i.e. soft and unstable), *ganyee* [⁵gɑʸ·ŋyeʌ·ː] 'leaf', *bèèlii* [¹be·ː⁵li·ː] 'flute', *bàreewàà* [¹bʌ·⁵ɾe·ːʷɑ·] 'gazelle'.

1.10.3. Umlaut. /u, oo, a/ are [ʉ, oʸ, aʸ] respectively before /ny/, or before /nk, ng, nʔ, nš/ followed by /i, ee/.    Before /nši/, /a/ is sometimes only [æ], the palatalization not being quite so strong.

E.g. /u/ *tudunyàà* [⁵t'ʊ·dʉ·ŋ¹yɑ·] 'hill', *tunkìyaa* [⁵t'ʉ·ŋ³ki·⁴ʸɑ·ː] 'ewe', *dʔunkìì* [⁵dʔʉ·ŋ¹ki·] 'sewing', *munʔiìbàà* [⁵mʉ·ŋ·ʔi·ː¹bɑ·] 'we fetched some', *munʔèèbeešì* [⁵mʉ·ŋ³ʔe·ː·⁴be·ː¹ši] 'we fetched a little of it', *hannunšì* [⁵hɑ·n·ʉ·n¹ši] 'his hand'.
/oo/ *šinà soonyàsààmì duuniyàà* [⁵ši·³nʌ⁴soʸ·ː²ŋyʌ·sa·ːmɩ ³du·ːni·¹ʸʌ·] 'he wanted to receive the world', *ʔinà soonkì* [⁵ʔɩ·³nʌ⁴soʸ·ː¹ŋk̬i] 'I love you (f.)', *tanà soongizòò* [⁵t'ʌ·³nʌ ⁴soʸ·ː²ŋ³ĝɩ·¹zo·] 'she wants the spider', *sunà soonʔìntàfi* [⁵sʊ·³nʌ ⁴soʸ·ː-²ŋʔɩnt'ʌ·³hi·] 'they want me to go', *šinà soonšì* [⁵ši·³nʌ ⁴soʸ·ː¹nši] 'he likes him'.
/a/ *hanyàà* [⁵hɑʸ·ŋ¹yæ·] 'road', *gwankii* [⁵gwɑʸ·ŋk̬i·ː] 'Roan antelope' (BD), *kàwankèèšì* [¹k'ʌ·⁵wɑʸ·ŋ¹k̬e·ːši] 'wash it!', *bàkangizòò* [¹bʌ·⁵k'ɑʸ·ŋĝɩ·¹zo·] 'rainbow', *wanʔìn* [⁵wɑʸ·ŋ¹ʔɩn] 'that one', *naaganšì* [⁵nɑ·ːgɑʸ·n¹ši] 'I saw him', *baayanšì* [⁵bɑ·ːyæ·n¹ši] 'his back'.

1.10.4. Otherwise /u, oo, a/ are as follows:

/u/ [u] before /u/ or /w/, [ʉ] in /run/, [ʋ] elsewhere ([ʋ] as *oo* in English *soot*). E.g. *suunaa* [⁵su·ːnɑ·ː] 'name', *ruwaa* [⁵ɾu·ʷɑ·ː] 'water', *bàrunjèè* [¹bʌ·⁵ɾʉ·n¹že·] 'butcher', *kudʔii* [⁵k'ʷʋ·dʔi·ː] 'money', *mussàà* [⁵mʋ·s·¹ɑ·] 'cat'.

/oo/ [o] This is a pure vowel, not a diphthong.

E.g. *zoomoo* [⁵zo·ːmo·ː] 'rabbit', *tabòò* [⁵t'ʌ·¹bo·] 'scar', *tooyèè* [⁵t'o·ː¹ʸe·] 'to burn'.

/a/ Beside the above mentioned [ɑʸ], /a/ has the variants: [æ], [ɛ], [ɒ], [ɑ], [ʌ⁼], [ʌ].    The distribution of these is very complex, and no clear pattern has yet emerged.    There appears to be some free variation among them.    E.g. *luubìyaa* [⁵lu·ː³bi·⁴ʸæ·ː/ɑ·ː] 'ripe fruit', *maatinjà* [⁵mɑ·ːt'ɩ·n¹žʌ/æ] 'messenger', *yaayi* [⁵yɑ·ːʸi·, yɛ·ːʸi·] 'he made'.    Examples of the different variants are:

---

[10] The system of vowel length was worked out with contrasting pairs, and the results as set forth here were applied to other examples.    The length of a vowel as given in brackets is not an impressionistic one, but an interpretation from the phonemic or semi-phonemic recording.    Final vowel lengths are also re-interpretations in some instances.    Examples were re-checked with an informant when possible.    The phonetic difference between identical phonemic lengths has been occasionally noted by others.    For example, see BD under *da*: of *da* II (*daà*) he says 'a very long vowel' but of *da* III (*dàà*) 'vowel not so long as in *da* II'.

[æ] *yafk²ii* [⁵yæ·ḅk²i··] 'sliminess', *baayanšì* [⁵bɑ::yæ·n¹ši] 'his back', *gyaftòò* [⁵ĝyæ·ḅ¹t'o·] 'skirt', *fiyaak²ii* [⁵hi·ʸ·æ<·k²i··] 'smoke', *šàntuu* [¹šæn⁵t'u··] 'a long calabash'.

[ɛ] *yaddàà* [⁵yɛ·d¹·ɑ·] 'to throw away', *yazgaa* [⁵yɛ·zgɑ··] 'hair of horse's tail', *buuyà* [⁵bu·:¹yɛ] 'pig iron', *gàjàrtaa* [¹gʌ·z̀ɛᵣ⁵t'ɑ··] 'shortness', *tàrc²ii* [¹t'ɛᵣ⁵c²i··] 'flickering', *yaaragèè* [⁵yɑ::ᵣɛ·¹ĝe·] 'he left some', *dafìì* [⁵dɛ·¹hi·] 'poison', *daree* [⁵dɛ·ᵣe··] 'night'.

[ɒ] *fanfaryaa* [⁵hʷɒ·ŋhʷɑ·ᵣ'yɑ··] 'slipping off of handle', *kwalbaa* [⁵kwɒ·l̯ᵃbɑ··] 'bottle', *saabwangàrii* [⁵sɑ::bwɒ·ŋ³gʌ·⁴ᵣi··] 'a new town' (a foreign settlement).

[ɑ] *halšèè* [⁵hɑ·l̯¹še·] 'tongue', *²aroo* [⁵ʔɑ·ᵣo··] 'loan', *karb²èè* [⁵k'ɑ·ᵣ¹b²e·] 'to answer', *k²arfii* [⁵k'ɑ·ᵣhi··] 'strength', *banzaa* [⁵bɑ·nzɑ··] 'foolishness', *samroo* [⁵sɑ·mᵣo··] 'mosquito', *kay* [⁵k'ɑ·y] 'you' (m.sg.), *sawc²ii* [⁵sɑ·wč²i··] 'glossiness'.

[ʌ⁻] *sanì* [⁵sʌ⁻·¹ni] 'to know', *zanìì* [⁵zʌ⁻·¹ni·] 'a type of woman's dress', *sàrìi* [¹sʌ⁻·⁵ᵣi··] 'leather worm'.

[ʌ] *masassabii* [⁵mʌ·:sʌ·s·ʌ·bi··] 'a harvesting implement' (BD sub *magirbi*), *fašìì* [⁵hʷʌ·¹ši·] 'breaking', *k²àlaa* [¹k'ʔʌ·⁵l̯ɑ··] 'the young of almost any fish' (BD), *šagàlìi* [⁵šʌ·³gʌ·⁴l̯i··] 'business' (BD), *watàà* [⁵wʌ·¹t'ɑ·] 'moon, month'.

A descriptive statement would have to take into account exact phonetic length, tone, stress, and phonetic environment as to both consonants and nearby vowels. A few generalizations may be made but only as guides, not as rules. [æ] and [ɛ] tend to appear after palatals (/y, j, c, š/) and before syllables with /i, e/. [ɒ] appears near (usually after) /w, f/. /aa/ is usually [ɑ]. /a/ is [ɑ] near back consonants and before /m, n, w, y/ in the same syllable. With a complete statement, /a/ would be [ʌ] elsewhere.

1.11. Tone.[11] Hausa has two phonemic tones: high /´/ and low /`/. Phonetically relative tone is determined by tone phrase contour, ranging from basic high [5] to basic low [1], the difference between these basic points being a musical fifth. This means there are five phonetic levels of tone. Each word has its own tone pattern phonemically. In placing words together in a tone phrase, the phonetic value of the phonemic tones is determined by the phrase contour. There are at least two tone phrase contours, the narrative and the interrogative. The narrative is the basic contour, the interrogative being a modification of it. These contours may be stated in numbers from 1 to 5 for the five levels of tone. Several general statements may be made:

a. Every tone phrase initial or final /´/ is [1].

b. The first /´/ in a tone phrase is [5].

c. Every tone phrase must have at least one /´/.

d. A series of two or more tones of the same phonemic level remain on the phonetic level of the first.

e. A tone phrase may consist of any number of successive tone units (single tones) within a contour pattern from a single high to a complete pattern.

1.11.1. The narrative contour. The narrative contour is [1 5 3 4 2 3 1 2], i.e. starting with the first /´/ [5] every drop is two steps and every rise one, except that any final /´/ is [1] (statement a). Many examples have been given

---

[11] Compare BD xxvii–xxviii, PH 4–8, 129–132, MGHS 137–142, ISH 3, HT.

in sections 1.1 to 1.9. The following examples are given in phonemic transcription only, with the phonetic tone indicated by numbers under the phonemic tone:

*kàkwancèèmu gà sarkˀàà* 'release us from the chains!'
1   5  3  4  2 3   1

*munà fadˀàà dà mazààjee* 'we were fighting with men'
5 3 4  2   2   3 1  2

*màykàràmbàànìinèè* 'he's a bothersome person'
1  1 1   1   5  1

*taagaa sarkìi* 'she saw the king'
5  5   5   5

*šìnà jaǹdookìì* 'he's pulling the horse'
5 3  42 3  1

An utterance may include any number of tone phrases. For example:

*sˀoofoonrììgaa // taafi baà koomìi* 'an old shirt is better than none' (lit.
5  5   3 4    5  5  53  4   4
'exceeds "without anything" ').

*dookìì wannàn // dàban yakèè dà naakà* 'this horse is different than yours'.
5  3  4   1      1 5   5 3   3  4  1

*duuniyàà //taayi màykyaẁ,// duuniyàà // taayi muugùù,// baabù muugùù,//*
5  5 1    5  5  3   41    5   5 1     5   5 5  1    5  3  4  1
*baabù màykyaẁ,// baabù duuniyàà.* 'the world has made good people (lit. a
5  3  3   41   5  3  4  4 1
good one) and bad people (lit. a bad one); were there no bad, were there no good, (there'd be) no world'.

1.11.2. Interrogative contour.[12] The equivalents of English questions frequently have simple narrative contours:

*mììneenèè // kaajimàà dà yawà* 'why did you take so long?'.
1 5 1     5  5 3   3  4 1

*wààneenèè // yaaˀaykookà* 'who sent you here?'.
1  5  1     5   5   5  1

On the other hand, many questions have a contour which differs from the narrative and may be called the "interrogative contour'. Although definite rules have not been established, the characteristic feature is a replacement of phonemic lows by highs towards the end of the utterance. Examples are:

*dòòmimmììneenèè // kaamancèè?* 'why did you forget?'. Only the second
1  5   3 4  1     5  5  51
contour is interrogative. The narrative is *kaamancèè*.

*dammììneenee?* 'why?' for *dammììneenèè* (also recorded in the same text).
5   3 4  4        5   3 4  1

The interrogative is here followed (in the text) by the rest of the question with narrative contour. Contrast the last example ('why did you forget?') where the first part of the question had narrative contour and the second interrogative.

---

[12] Compare MGSH 100–105, ISH 66–68.

*kanòò* // *mad?ùnkii da yawa?* 'are there many tailors in Kano?'.   Narra-
　5 1　　　5　3　4　　5　5　5

tive: *dà yawà*.
　　　2　3　1

*hakààneè?* 'is that so?'.   Narrative: *hakàànee*.
　5 3　　51　　　　　　　　　　　　　　5　3　　4

1.12. Junctures.   There are three phonemic junctures.

1.12.1. Close juncture.   This juncture is marked by the contiguity of suc-
cessive phonemes in an utterance and indicates lack of pause or of facultative
pause.   For example, in *gaafaràà* 'pardon', this juncture occurs between each
linear phoneme and the following one beginning with /g/ and /a/ and ending
with /à/ and /à/.   The final /à/ is followed by open juncture.

1.12.2. Open juncture occurs before the first morpheme in an utterance and
after any morpheme or combination of morphemes not bound by close juncture
to the morpheme following (therefore before any not bound by close juncture
to the morpheme preceding).   It is phonetically pause, facultative pause or only
a conditioning of preceding vowel length.   It is indicated by space in a text or
by / ⚡ / in discussions.   Phonetically it conditions the length of any vowel
preceding it.   It also has a morphophonemic function, for which see 2.2).

1.12.3. Tone phrase juncture occurs simultaneously with either close or open
juncture, though usually with the latter.   It indicates the end of a tone phrase
contour and the beginning of a new one (if followed by another morpheme or
sequence of morphemes).   No special mark (except punctuation) is used in
utterance initial or final position, it being understood that a tone phrase begins
when an utterance begins and that one ends when an utterance ends.   Medially
in an utterance it is indicated by //.   Examples are:

*gàrimmù* // *lookàcintuuraawaa bàsùzoo ba* // *munà yaak?induuniyàà* // *munà*
　1 5　1　　5　3 4　4　4　4　2 2 3　3　　　5 3　4　4　4　4 1　　　5 3
*kašèè mutàànee*.   'In our country at the time the Europeans hadn't come, we
　4 2　　3 1　2

were a fighting world; we killed people.'

*yaagayàà manì* // *nii* // *bàà namijìì banèè*.   'He said to me, "I'm not a
　5 5 3　　4 1　　5　　　1　5 53　4 1

he-man."'

*nii bànkulàà ba* // *?àbin*//*dà sunceè*.   'I don't care what they say.'   Here
　5　3　41　1　　1 5　　　1 5　51

the sequence *?àbindà* has only close juncture, but the change of contour shows
that there is also a tone phrase juncture.   Since contour final low and contour
initial low are both 1, there is no phonetic criterion for determining whether the
juncture is before, after, or in *dà*.   The division here is made for syntactic
reasons (*dà sunceè* = noun, so is treated as a unit).   Although the present notes
are not decisive, it would seem probable that at least some tone phrase junctures
are facultative.[13]

1.13. Stress.   Hausa has stress as well as tone, but this remains unstudied in

[13] Compare Bloch, Language 22.201–202 in regard to pauses in Japanese.

this description.[14]   It is hoped that a study of it can be made and a definitive statement issued.   This would help to clear up some other problems.   For example, the positional variants of the phoneme /a/ are in some cases related to stress.   Compare *daɽàà* [⁵'dɛːˈɽʌː] 'a game played by moving pieces on a board' and *madaɽaa* [⁵'mʌːdʌːɽʌːˑ] 'fresh milk', where the /a/ in /daɽ/ is [ɛ] when stressed and [ʌ] when unstressed.   From the little known thus far, stress appears to be non-phonemic.   It is left unrepresented in the phonetic transcriptions as the material used has practically no stress marked, the emphasis having been upon tone.

1.14. Phonemic distribution.

1.14.1. Vowels.   A vowel may follow a consonant or an identical vowel.   It may precede a consonant, an identical vowel, or / ⋕ /.   The vowels /e/ and /o/ are further limited in that they occur only in clusters /ee/ and /oo/.

/i/ *ʔidòò* 'eye', *duucʔìì* 'rock'.   /ii/ *ʔiikòò* 'authority, power'.   /ee/ *kàbeewàà* 'squash', *ganyee* 'leaf'.   /u/ *bundìì* 'tail', *bùnsuruu* 'goat'.   /uu/ *duuniyàà* 'world', *duu* 'scorpion'.   /oo/ *kòòmoo* 'like'.   /a/ *daasàšii* 'gums', *giiwàà* 'elephant'.   /aa/ *dààmisàà* 'leopard'.

1.14.2. Consonants, single.   Any consonant may occur initially after pause or medially between vowels.   Examples:

| | Initially | Medially |
|---|---|---|
| /ʔ/ | *ʔiskàà* 'wind' | *baʔà* 'joke' |
| /b/ | *ʔàbookii* 'friend' | *ʔabààwaa* 'yarn' |
| /b/ | *bʔàraawòò* 'thief' | *gabʔà* 'joint' |
| /c/ | *cukwii* 'cheese' | *ʔacàkookoo* 'a kind of rattle' |
| /c/ | *cʔanyà* 'cricket' (BD) | *duucʔìì* 'rock' |
| /d/ | *dabòò* 'magic' | *ʔadoo* 'smallpox' |
| /d/ | *dʔaakì* 'room' | *fadʔàà* 'fight' |
| /f/ | *farii* 'a white one' | *ʔafaɽaɽì* 'cream' |
| /g/ | *gàbaa* 'chest' | *gòògee* 'fiddle' |
| /h/ | *habʔà* 'chin' | *yaahadʔàà* 'he swallowed' |
| /j/ | *jìkì* 'body' | *bàjini* 'bull' |
| /k/ | *kumci* 'cheek' | *kèèkee* 'wagon, cart' |
| /kʔ/ | *kʔoofà* 'doorway' | *bakʔii* 'black one' |
| /l/ | *laakaa* 'mud' | *ʔàgùluu* 'vulture' |
| /m/ | *mijì* 'husband' | *ʔàlààmu* 'expectation' |
| /n/ | *niisaa* 'far' | *ʔàmaanà* 'peace' |
| /p/ | *pàmpam* 'that's all' | *pìlààpìlay* 'butterflies' |
| /r/ | *reešèè* 'branch' | *farii* 'white one' |
| /ɽ/ | *ɽamà* 'hemp' | *ʔafaɽaɽì* 'cream' |
| /s/ | *sagoo* 'whirlwind' | *ʔàlbasà* 'onion' |
| /sʔ/ | *sʔuusʔà* 'worm' | *duwààsʔuu* 'rocks' |
| /š/ | *šaafoo* 'hawk' | *saašèè* 'half, part' |
| /t/ | *tàwsay* 'compassion' | *ʔàbùtaa* 'friendship' |
| /w/ | *wàndoo* 'trousers' | *gaawaa* 'dead body' |

---

[14] Compare MGSH 141–142, PH 5, 6, 8–13.

/y/     *yaajì* 'pepper'                              *ʔaya* tiger-nut grass'
/z/     *zoobèè* 'ring'                               *ʔazùrfa* 'silver'

The following consonants were noted in final position:

/p/     *ʔalìp* '1000'                       /f/     *šàòrif* 'descendant of
                                                               the prophet'
/s/     *takwàs* 'eight'                     /m/     *pàmpam* 'that's all'
/š/     *tàɾbuš* 'fez'                       /n/     *gusùn* 'south'
/t/     *minìt* 'minute'                     /w/     *màntaw* 'forgetful
                                                               person'
/ɾ/     *sèèbuɾ* 'table, shovel'             /y/     *màlàaʔìkay* 'angels'
/l/     *kʔùful* 'a field rat'

   1.14.3. Consonants, initial clusters.   The following initial clusters were noted:

/kw/    *kwaanaa* 'day'                      /ky/    *kyarma* 'trembling'
/kʔw/   *kʔwalwaa* 'brain'                   /kʔy/   *kʔyàlkʔyàli* 'glittering'
/gw/    *gwaazaa* 'koko yam' (BD)            /gy/    *gyàmroo* 'volunteer
                                                               corn'
/dw/    *dwaalakʔii* 'hugeness'
/dʔw/   *dʔwaacii* 'bitterness'              /ʔy/    *ʔyaaʔyaa* 'children'
/sw/    *swàànee* 'stealing off
                 someone'
/sʔw/   *sʔwaasʔòò* 'cockroach'
/zw/    *zwààri* 'greed'

Note that all have /w/ or /y/ as second member of the cluster.[15]

   1.14.4. Consonants, medial clusters.   The accompanying chart gives the medial two consonant clusters noted.   Geminates of all but glottalized consonants are found (see 1.8).   /y/ occurs unrestrictedly as first member and /n/ subject only to rules of replacement (see 2.2.3).   The chart is arranged to show the limitations of voiced-voiceless or voiceless-voiced combinations.   Phonemes /p/ to /j/ do not occur in two consonant clusters with each other unless both members of the cluster are either voiced or voiceless.   The glottal stop may also belong to this group.   The other consonants, /r/ to /y/, do not have this limitation.   It is generally a limitation of consonants which have voiced or voiceless counterparts, but the pattern is by no means perfect:

              p, f, h   t    k    s    š, c
                 b      d    g    z    j

The glottalized series /bʔ, dʔ, kʔ, sʔ, cʔ/ do not have counterparts but are restricted in clusters in the same way as the unglottalized.   They are further restricted in that they occur initially in clusters only before /w/ and /y/.   /bʔ/ and /cʔ/ were not found initially in clusters.   *p* is usually a free variant of /f/ when initial in clusters (and elsewhere, see fn. 5).   Examples of both are given

---

[15] The following additional initial clusters with /w/ or /y/ are given in Bargery (BD) as from Katsina: /bw/ *bwiya* (given as *buuya* by my informant), /bʔw/ *bʔwalanbʔwantani*, /cw/ *cwai*, /fy/ *fyace*, /lw/ *lwacʔi* /nw/ *nwai*, /rw/ *rwagga*, /ɾw/ *rwabbe*.   Others, not labelled as from Katsina, are: /by/ *byallam*, /bʔy/ *bʔyasa*, /fw/ *fwatta*, /hw/ *hwi*, /hy/ *hyade*, /jw/ *jwai*, /mw/ *mwimwi*, /ny/ *nyar*.

and the equivalence with /f/ indicated where there is evidence of free variation.[16] Clusters such as /ft, fc, fs/ may be [bt, bc, bs], but phonemically /bt, bc, bs/ do not occur. Examples of the clusters on the chart are:

/pC/: /pt/ *gyaptòò* (= *gyaftòò*), pl. *gyaptàptay* 'shirt'. /pk/ *šipkà* (= *šifkà*) 'planting'. /pkʔ/ *yapkʔii* (= *yafkʔii*) 'sliminess'. /ps/ *kàtapsà* 'rope ladder'. /pš/ *tàpšee* (= *tàfšee*) 'a stew'. /pc/ *cipci* 'thatching grass' (BD).

/tt/: *battà* 'little (leather) box'.

/kC/: /kk/ *tukkuu* 'crest'. /kw/ *yaakwantàà* 'he lay'. /ky/ *kàkyankyànee*. /kʔC/: /kʔw/ *dakʔwalwaa* 'laying hen'. /kʔy/ *taakʔyaalèènì* 'she ignored me'.

/sC/: /st/ *kwastàmastà* (nickname for rooster): *kwatàà mastà* 'quartermaster'. /sk/ *ʔiskà* 'wind'. /skʔ/ *maskʔii* 'greasiness' /ss/ *mussà* 'cat'. /ssʔ/ *dàmsʔàss-ʔuu* 'upper arms'. /sw/ *yaaswaabʔèè* 'he skinned himself'.

/šš/: *šiššikee* 'beam'.

/cC/: /cc/ *ʔiccèè* 'tree'. /ccʔ/ *cʔaccʔafa* 'drizzle'.

/fC/: See also /pC/. /ft/ *dàftii* (= *dàptii*) 'stale food'. /fk/ *ʔafkì* 'swelling of grain in cooling' (BD). /fkʔ/ *yafkʔii* (= *yapkʔii*) 'sliminess'. /fs/ *hafsà* 'officer'. /fc/ *zàfcee* (= *zàpcee*) 'to bite (without warning, and then run)'. /ff/ *tàffa* 'ginned cotton'. /fš/ *naagwafšèèši* 'I hit him (hard)'.

/hh/: *bʔootàhhawyàà* 'the handle of the hoe'.

/bC/: /bb/ *bàbba* 'a big one'. /bbʔ/ *rùbʔabbʔee* 'rotten thing'. /bd/ *ʔabdùgàà* 'cotton'. /bdʔ/ *yabdʔoo* 'a plant whose seeds are used for soup'. /bg/ *sʔabgà* 'switch'. /bz/ *bàʔabzùnii* 'an easterner'. /br/ *kʔwaabri* 'shinbone'. /bl/ *makublii* 'key'.

/dC/: /dd/ *bùddarii* 'skunk'. /ddʔ/ *cèèdʔàddʔuu.* 'fig trees'.

/dʔw/: *madʔwaadʔìyaa* 'whip snapped to scare birds'.

/gC/: /gg/ *gààgàggi* 'torches'. /gw/ *ʔagwajaa* 'a small boat'.

/zC/: /zb/ *hazbiyaa* 'a wild, speckled pigeon' (BD). /zg/ *gìzgirii* 'heart (of plant)'. /zz/ *kòòzazzaa* 'faded (f.)'. /zw/ *naazwààree gùda* 'I took one'.

/jj/: *kòòzajjee* 'faded one (m.)', *jajjààyee* 'red ones'.

/rC/: /rk/ *sarkii* 'king'. /rk/ *sarkʔàà* 'chain'. /rcʔ/ *sarcʔèè* 'splinter'. /rf/ *kʔarfèè* 'metal'. /rbʔ/ *kirbʔìì* 'working of a dough-like mass'. /rg/ *bìrgaamì* 'goatskin bag'. /rj/ *kʔìrjii* 'chest'. /rr/ *kwàrarròò* 'bag of dum-palm leaves' (BD). /rm/ *bʔurmaa* 'a clay trap'. /rw/ *bùdurwaa* 'girl'. /ry/ *gùryaa* 'cotton seed'.

/ṛC/ /ṛt/ *buṛtu* 'ground hornbill' (BD). /ṛk/ *ʔààtùṛkùmaamii* 'a type of camel'. /ṛs/ *hàṛsa* 'insides of calabash'. /ṛš/ *kàbaṛši* 'leave him!'. /ṛc/ *baṛci* 'sleep'. /ṛcʔ/ *gaṛcʔàà* 'jaggedness'. /ṛf/ *ʔaṛfoofii* 'cheapness(es)'. /ṛh/ *ʔàṛhaa* 'cheapness'. /ṛb/ *ʔàrbàʔin* 'forty'. /ṛbʔ/ *gùṛbʔiyaa* 'peanut soup'. /ṛd/ *sàṛdiidìì* 'well-built man'. /ṛdʔ/ *naamurdʔèèšì* 'I twisted it'. /ṛg/ *bʔaṛgoo* 'marrow'. /ṛz/ *ʔaṛzìki* 'good fortune'. /ṛj/ *naaguṛjèè jìkiinaa* 'I bruised myself'. /ṛṛ/ *tòòṛàṛṛii* 'bulls'. /ṛm/ *gaṛmagaṛma* 'crazy'. /ṛn/ *ʔaṛnaa* 'pagans'. /ṛʔ/ *faṛʔàà* 'jollity'.

---

[16] Even should /p/ and /f/ be separate phonemes, probably only one (/f/) occurs phonemically in -CC- or as -C. Examples of both are given here due to the unsettled nature of the question.

## CHART OF MEDIAL -CC- CLUSTERS

| | p | t | k | k? | s? | s | š | c | c? | f | h | b | b? | d | d? | g | z | j | r | r̜ | l | m | n | w | y | ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| p | | pt | pk | pk? | | ps | pš | pc | | | | | | | | | | | | | | | | | | |
| t | | tt | | | | | | | | | | | | | | | | | | | | | | | | |
| k | | | kk | | | | | | | | | | | | | | | | | | | | | kw | ky | |
| k? | | | | | | | | | | | | | | | | | | | | | | | | k?w | k?y | |
| s | | st | sk | sk? | ss? | ss | | | | | | | | | | | | | | | | | | sw | | |
| š | | | | | | | šš | | | | | | | | | | | | | | | | | | | |
| c | | | | | | | | cc | | | | | | | | | | | | | | | | | | |
| c? | | | | | | | | | cc? | | | | | | | | | | | | | | | | | |
| f | | ft | fk | fk? | | fs | fš | fc | | ff | | | | | | | | | | | | | | | | |
| h | | | | | | | | | | | hh | | | | | | | | | | | | | | | |
| b | | | | | | | | | | | | bb | bb? | bd | bd? | bg | bz | | br | | bl | | | | | |
| b? | | | | | | | | | | | | | | | | | | | | | | | | | | |
| d | | | | | | | | | | | | | | dd | dd? | | | | | | | | | | | |
| d? | | | | | | | | | | | | | | | | | | | | | | | | d?w | | |
| g | | | | | | | | | | | | | | | | gg | | | | | | | | gw | | |
| z | | | | | | | | | | | | zb | | | | zg | zz | | | | | | | zw | | |
| j | | | | | | | | | | | | | | | | | | jj | | | | | | | | |
| r | | rt | rk | rk? | | rs | | rc | rc? | rf | | | rb? | rd | rd? | rg | rz | | rr | | | rm | rn | rw | ry | |
| r̜ | | r̜t | r̜k | r̜k? | | | r̜š | | r̜c? | r̜f | r̜h | r̜b | r̜b? | r̜d | | r̜g | r̜z | r̜j | | r̜r | | r̜m | | | | r̜? |
| l | | lt | lk | lk? | | ls | lš | | | lf | lh | lb | lb? | | | lg | | lj | | | ll | lm | | lw | | |
| m | | mt | | mk? | ms? | | mš | mc | mc? | mf | | mb | mb? | md | | | mz | mj | mr | | | mm | mn | mw | | |
| n | | nt | nk | nk? | ns? | ns | nš | nc | nc? | nf | nh | | | nd | nd? | ng | nz | nj | nr | nr̜ | nl | | nn | nw | ny | n? |
| w | | wt | wk | wk? | ws? | ws | wš | wc | wc? | | | | | wd | wd? | wg | | wj | wr | wr̜ | | | wn | ww | wy | |
| y | | yt | yk | yk? | ys? | ys | yš | yc | yc? | yf | yh | yb | yb? | yd | yd? | yg | yz | yj | yr | yr̜ | yl | ym | yn | yw | yy | y? |
| ? | | | | | | | | | | | | | | | | | | | | | | | | | ?y | |

/lC/: *salpoo* (= *salfoo*) 'wheedle (?)'. /lt/ *sùltan* 'sultan'. /lk/ *sàlka* 'leather waterbag'. /lk²/ *k²àlk²aši* 'underneath'. /ls/*halsoošii* 'tongues'. /lš/ *halšèè* 'tongue'. /lf/ *²àlfadari* 'mule'. /lh/ *²àlhàṛiinì* 'silk'. /lb/ *²àlbaṛkà* 'blessing'. /lb/ *b²àlb²àši* 'speck'. /lg/ *²àlgaytà* 'a wing instrument'. /lj/ *²àljannà* 'Jinn'. /ll/ *²allà* 'God'. /lm/ *²almakaši* 'scissors'. /lw/ *²àlwasà* 'width of woven material', *walwaajìì* 'a deer-like animal' (BD under *inyawara*).

/mC/: /mp/ *pàmpam* 'that's all'. /mt/ *²àzààlùmtakà* 'oppression (?)'. /mk²/*sàmk²ee* 'loincloth'. /ms/ *lumsaaši* 'opening and closing, alternant shining and clouding over of sun, etc.'. /ms²/ *dams²ooc²ii* (pl. of *damc²èè*) /ms/ *lùmšii* 'big cloud'. /mc/ *gùmcì bààkinkà* 'fill your mouth!'. /mc²/ *damc²èè* 'upper arm'. /mf/ *rùmfa* 'shed'. /mb/ *dambuubù* 'calf of leg'. /mb²/ *dumb²uu* 'worn out implement'. /md/ *yaagamdààka* 'it fits you'. /mz/ *gumzuu* 'wild pig'. /mj/ *gamjìì* 'gutta-percha tree' (BD). /mr/ *damroo* 'a variety of bulrush millet' (BD sub *dauro*). /mm/ *bammì* 'palm wine'. /mn/ *k²àmnaa* 'love'. /mw/ *s²umwà* 'rag'.

/nC/: /nt/ *²àmìntaa* 'trust', *bàntee* 'loincloth'. /nk/ *cànkoo* 'bird trap'. /nk²/ *dank²òò* 'gum'. /ns/ *bùnsuruu* 'goat'. /ns²/ *s²uns²uu* 'bird'. /nš/ *sunšifkàà* 'they sowed'. /nc/ *yaakwancèèši* 'he released him'. /nc²/ *yaaran²èè* 'he swore'. /nf/ *²ànfààni* 'usefulness'. /nh/ *sunhàyfeetà* 'they bore her'. /nd/ *bindigà* 'gun'. /nd²/ *tàkànd²aa* 'sugar cane'. /ng/ *²angòò* 'bridegroom'. /nz/ *banzaa* 'foolishness'. /nj/ *yaarìnjààyeeši* 'he overpowered him'. (/nr/ *sunrifèèšì* 'they opened it'. /nṛ/ *sunṛuud²èè* 'they're confused'. /nl/ *sunlullùb-²eeta* 'they veiled her'.) /nn/ *sunnèèmeešì* 'they charmed him'. /nw/ *d²an-waakèè* 'dumplings' (see BD). /ny/ *yaarinyà* 'girl'. /n²/ *wan²ìn* 'that'.

/wC/: /wt/ *²àwtaa* 'the youngest'. /wk/ *hàwkaa* 'wrath'. /wk²/ *sawk²ii* /ws/ *tàwsay* 'compassion'. /ws/ *s²àws²ay* 'accident'. /ws/ *bawšìì* 'a tree'. /wc/ *kàcawcawa* 'bells tied to ankle or knee when dancing'. /wc²/ *sàwc²ii* 'glossiness'. /wd/ *dàwdawaa* 'a flavoring for soup'. /wd²/ *gawd²èè* 'a thorny shrub' (BD). /wg/ *gawgawa* 'something heavier than one can manage'. /wj/ *bawjee* 'an edible root'. /wr/ *b²awree* 'rough-leaved fig tree' (BD). /wṛ/ *²awṛàà* 'a light colored donkey' (BD). /wn/ *b²awnaa* 'water buffalo'. /ww/ *wàwwoo* 'name of child born on New Year's', *nawwìi* 'weight, heaviness'. /wy/ *hawyaa* 'hoe'.

/yC/: /yt/ *²àlgaytà* 'a wind instrument'. /yk/ *²aykìì* 'work'. /yk²/ *mayk²òò* 'grease'. /yš/ *màysaà* 'one who places'. /ys²/ *mays²aawoo* 'a long one'. /ys/ *naakayšì* 'I took him'. /yc/ *kaycoo* 'too bad'. /yc²/ *màyc²aa-wuryaa* 'one with leucoma'. /yf/ *sayfàà* 'spleen'. /yh/ *màyhimmà* 'ambitious one'. /yb/ *²àyba* 'banana'. /yb/ *sayb²ii* 'unpopularity'. /yd/ *saydààwaa* 'selling'. /yd²/ *mad²ayd²ay* 'syrup made from dried fruit' (pl.). /yg/ *bàyganì bà* 'he didn't see'. /yz/ *tuuzàyzay* 'bustards'. /yj/ *bàyji ba* 'he didn't hear'. /yr/ *gàràyray* 'white ants'. /yṛ/ *màyramà* 'scorpion' (lit. 'one with sting'). /yl/ *màylab²èèwaa* 'eavesdropper'. /ym/ *²aymaka* 'a red insect'. /yn/ *màray-nìyaa* 'orphan' (f). /yw/ *maywaa* 'a fruit', *gaỳwaa* 'eel'. /yy/ *jààyayyee* 'red ones'. /y²/ *mày²amoo* 'that which makes a report or noise'.

/²y/: *²yaa²yaa* 'children'.

Medial clusters of three consonants include all initial clusters preceded by *n* or *y* since they may be preceded by *n(a)*, *may-* 'one with' or (in the case of verbs) by *sun-*, *bay-*, etc. We have, then:

| /nkw/ | /nky/ | /nsw/ | /ykw/ | /yky/ | /ysw/ | /yʔy/ |
|-------|-------|-------|-------|-------|-------|-------|
| /nkʔw/ | /nkʔy/ | /nsʔw/ | /ykʔw/ | /ykʔy/ | /ysʔw/ | |
| /ngw/ | /ngy/ | /nzw/ | /ygw/ | /ygy/ | /yzw/ | |

Examples of some of these not with *na* or *may* are: /nkw/ *munkwabʔèèši* 'we released him', /nky/ *kyànkyandii* 'duffel bag', /nkʔw/ *taalankʔwàšèè* 'it bent', /nkʔy/ *kʔyànkʔyasà* 'hatching', /ykw/ *càkwaykwaywà* 'starling' (BD), /ykʔw/ *bàykʔwàntàleešì bà* 'he didn't dig him with his fingernail'.

Besides these the following clusters were noted:

/lkw/ /lkʔw/ /lky/ /lkʔy/ /lgr/ /rkw/ /rgw/ /wky/ /kkw/ /ngl/

Examples: /lkw/ *kwalkwatà* 'louse'. /lkʔw/ *naakʔwalkʔwàleeši* 'I stripped him of hair'. /lky/ *ʔalkyabbà* 'a burnous' (BD). /lkʔy/ *kʔyàlkʔyàli* 'glitter'. /lgr/ *tàlgraafòò* 'telegraph'. /rkw/ *kwarkwaroo* 'a weaver's bobbin (BD). /rgw/ *naàragwargwàjeeši* 'I'll smash him to bits' (= *naàragargàjeeši*). /wky/ *kyàwkyaawaa* 'goodness, fineness'. /kkw/ *tùkkwi* 'Great horned owl'. /ngl/ *ʔinglìs* 'English'.

## CHAPTER II

## PHONOLOGIC ALTERNATION AND MORPHEME VARIANTS

2.1. Morpheme types. Hausa morphemes are composed of the following sequences:

1. Sequence of two or more linear phonemes or morphophonemes.

E.g. Verb base: *soo-* 'want' *z-* 'be on one's way'

Affix: *-ii* (plural)

CVC- (a reduplicative morpheme; see 3.3.2)

2. Sequence of one or more tone units as pattern.

E.g. Noun patterns: ` ´ (all tones low until the last), ´ ´ (all tones high), ´ ` (all tones high until the last), etc. See 3.1.2.

Verb patterns: ´, ` ´, ´ `, etc. These are not single patterns but are tone sets with regularly conditioned patterns. See 3.1.2 and 4.5.

3. Sequence of two or more linear phonemes plus tone pattern.

E.g. Noun base: *gaašìi* 'hair'

Particles: *toò* 'so!' *dà* 'with'

For lists of these sequences see the dictionary and also below (noun bases and affixes, Chapter III; verb bases and affixes, Chapter IV).

2.2. Regular phonologic alternation.

2.2.1. Morphophonemes involved. The rules governing these are operative when a morpheme or sequence of morphemes occurs before open juncture / # /. The phonemes and morphophonemes involved are:

/t/ *T* /z/ *Z* /n/ *N* (n) /y/ *Y* /e/ *E* (e) /i/ *I*

/d/ *D* /f/ *F* /m/ *M*  /o/ *O* /a/ *A*

Affix juncture: /-/

Phonemes without corresponding morphophonemes: /s/ /sˀ/ /w/

2.2.2. Palatalization. Before affix juncture plus /i, e/ the following replacements take place:

/t/ is replaced by /c/, /tt/ by /cc/.

E.g. *\*bawt-ii bawcii* 'Bauchi' (proper name), *\*bawt-aawaa bawtaawaa* 'inhabitants of Bauchi'. *šaat-* 'to comb': *\*ma-šaat-ii mašaacii* 'a comb', *\*šaat-èè* (verb form) *kàšaacèè sùùmakkà* 'comb your hair!'. *bˀaat-* 'to spoil': *\*bˀaat-ì* (verb form) *yaabˀaacì* 'he's spoiled'. *\*ˀitt-èè ˀiccèè* 'tree', pl *\*ˀit-àà-t-ee ˀitààcee*.

*T* is optionally replaced by /t/ or /c/. One example noted: *feeT-* 'to fan': *\*ma-feeT-ii mafeetii* or *mafeecii* 'a fan'.

*D* is replaced by /d/ in all positions.

E.g. -D- (verb stem formative; see §4.2.3): *baa-* 'to give', *\*baa-D-* 'to give away': *\*baa-D-àà* (verb form) *yaabaadàà ši* 'he gave it away', *baadààwaa* 'giving something away', *\*ma-baa-D-ii mabàà dii* 'one who gives away'. *\*cˀààD-aa cˀààdaa* 'expensiveness', pl. *\*cˀaaD-oD-ii cˀaadoodii*.

/dd/ is replaced by /cc/.

One example noted: *\*bˀadd-* 'to lose' *\*bˀadd-èè* (verb form) *yaabˀaccèè* 'he's lost', but *\*bˀadd-àà yaabˀaddààši* 'he lost it'.

/d/ is otherwise replaced by /j/.

24

E.g. *gid-aa gidaa 'house', also *gid-ìì gijìì; pl. of both: *gid-ààd-ee gidàajee. *kʔund-àà kʔundàà 'an arrow with a slug head', pl. *kʔund-ood-ii kʔundoojii.

/s/ is replaced by /š/, /ss/ is replaced by /šš/.

E.g. buus- 'to blow': *ma-bùùs-ii mabùùšii 'player of a wind instrument', pl. *ma-bùùs-aa mabùùsaa; *bùùs-ass-ee bùùsaššee 'a dried thing'. *dààmis-ìì dààmišìì 'leopard', f. *dààmis-àà dààmisàà.

/sʔ/ is replaced by /cʔ/.

E.g. ransʔ-·'to swear an oath': *ransʔ-èè yaaranc ʔèè 'he swore an oath', *ransʔ-uwaa ransʔuwaa 'swearing'. *duwsʔ-ìì duuc ʔìì 'rock', pl. *duw-àà-sʔ-uu duwààsʔuu.

/z/ is replaced by /j/.

E.g. z- 'to be on one's way': *z-ee yaajee 'he went', *z-oo yaazoo 'he came'. *giz-òò gizòò 'spider (in folklore)', pl. *giz-ààz-ee gizààjee. ciiz- 'to bite': *ma-cììz-ii macììjii 'snake' (lit. 'biter'), *ciiz-òò ciizòò 'biting', *cììz-èe yaacììjeenì 'he bit me'.

Z is replaced by /z/ in all positions.

E.g. *kùz-aa kùzaa 'Tin ore' (BD), pl. *kuz-ooz-ii kuzoozii.

/w/ is replaced by /y/.

E.g. *baaw-àà baawàà 'slave', pl. *baaw-ii baayii. *bʔàraaw-òò bʔàraawòò 'thief', pl. *bʔàrààw-ii bʔàrààyii.

2.2.3. Nasals.

/n/ is replaced by /m/ before close or affix juncture plus /b/, /bʔ/, [p], /f/, or /m/. For na in the following examples see §2.3.4.

E.g. *gid-aa na barcii gidambarcii 'hotel' (lit. 'house of sleep'). bʔaar- 'to peel': *CVn-bʔaar- bʔambʔar- 'to shell' bʔàmbʔaràà 'shelling'. *ʔyaa na maat-aa ʔyammaataa 'young women' (lit. 'children of women'). *runfaa ta paawàà If the /f/ of rùnfaa is [p]: rùmpappaawàà; if it is [hʷ]: rùnfappaawàà, 'butcher's mart'. *dʔaa na paawàà dʔampaawàà 'butcher' (lit. 'son of the butcher's trade').

N is replaced by /m/ before / # / and /-i/, by /n/ elsewhere. Noted in one morpheme only: *mùtuN mùtum 'person', pl. *mut-àà-N-ee mutàànee; *mùtuN-cìì mùtuncìì 'respect'; with na: mùtumìndaajì 'bushman'.

(n) is replaced by zero before / # /, the preceding vowel being lengthened; by /n/ elsewhere.

E.g. *kànti(n) kàntii 'canteen, store', pl. *kàntì(n)-ay kàntìnay. *kantu(n) kantuu 'block of salt', pl. *kàntù(n)-ay kàntùnay.

/m/ is replaced by /n/ before /k, g/ before close or affix juncture.

E.g. *tum-k-ìyaa tunkìyaa 'ewe', pl. *tum-aa-k-ii tumaakii. *gam- 'to put together': *ma-CVC-gam-ii magangamii 'crossroads'.

M is replaced by /n/ before / # /, by /m/ elsewhere.

E.g. *lììmaaM lììman, variant lììmaamìì 'Imam', pl. *lììmààM-ay lììmààmay. *maalàM maalàn 'a Mohammedan teacher', pl. *maalàM-ay maalàmay.

2.2.4. Semivowels.

Y is replaced by /w/ before /o/.

E.g. say- 'buy': *sày-aa yaasàyaa 'he bought (something)', *say-oo kàsawoošì 'buy it (and bring it here)'. kaay- 'to bring': *kaay yaakayšì 'he brought it', *kaay-oo kàkaawoošì 'bring it here!'

Vy is replaced by VV before syllabic initial CC in affix juncture, by V before CC in affix juncture otherwise.

E.g. *kwiy-oo *kwiy-kwiy-òò kwiikwiyòò 'puppy', pl. *kwìyàà-kwìy-ay kwìyààkwìyay. *sᵠàwsᵠay sᵠàwsᵠay 'disaster', *sᵠàwsᵠày-ntakà sᵠàwsᵠàntakà 'state of injury'. kaỳ 'head' *kaỳ-na-kà kaǹkà 'your head'.

/V-i/ is replaced by /Vyi/.

E.g. jaa- 'pull': *ma-jàà-ii majààyii 'one who pulls'. soo 'to want': *ma-sòò-ii masòòyii 'one who wants, lover'.

/V-o/ is replaced by /Vwo/.

E.g. jaa 'to pull': *jaa-oo jààwooši 'pull it!'

2.2.5. Replacement of /r/ by /ŗ/.

/rt/, /rn/ and /r ⋕/ are replaced by /ŗt/, /ŗn/ and /ŗ ⋕/ respectively.

E.g. bar- 'to leave', *bar yaabaŗ gidaa 'he left the house'. yaabaŗŝì 'he left it' (yaabaŗ-ŝì),[1] but *bar-i kadàkàbarì 'don't leave it'. *kàr-ee kàree 'dog', pl. *karnukà kaŗnukà.

2.2.6. /f/, F.

/f/ remains /f/ in all positions.

E.g. *kᵠaf-àà kᵠafàà 'foot', pl. *kᵠaf-oof-ii kᵠafoofii or *kᵠaf-àyf-ay kᵠafàyfay F is replaced by /h/ before /-a/.

E.g. *ᵠàrF-aa ᵠàrhaa 'cheapness', pl. *ᵠarF-ooF-ii ᵠarfoofii. *kiiF-ii kiifii 'fish', pl. *kiiF-ààyee kiihààyee. *ᵠàràF-iyàà ᵠàràfiyàà 'fine thread', pl. *ᵠàràF-ay ᵠàràhay.

2.2.7. Vowels in closed syllables.

Before /C ⋕/ and /CC/ other than those listed in 1.14.3 (compare replacement of Vy in 2.2.4) the following replacements take place:

/ii/, /uu/, and /aa/ are replaced by /i/, /u/, and /a/ respectively.

/ee/ is replaced by /a/.

/oo/ is replaced by /wa/ after /k, kᵠ, g, d/, by /a/ elsewhere. Before /naC/ the last two (/ee/ and /oo/) sets of changes are optional.—For example:

/ii/ ∼ /i/. daadᵠii 'pleasure', *dààdᵠìì-ntakà dààdᵠìntakà 'pleasantness'. tààfii 'palm or sole', *tààfii na hannuu tààfinhannuu 'palm of the hand'.

/uu/ ∼ /u/. muugùù 'an evil person', *mùùgùù-ntaa mùgùntaa 'evil' (for muug- mug- see 2.3.2). hannuu 'hand', *hannuu na hagùù hannunhagùù 'left hand'.

/aa/ ∼ /a/. saaᵠàà 'luck', *sààᵠàà-ntaa sààᵠàntaa 'luck'. mààtaa 'woman, wife',*mààtaa ta šii mààtašši 'his wife'. *lààdaan lààdan 'muezzin', also lààdaanìì.

/ee/ ∼ /a/. gàjeeree 'a short one', *gàjèèr-taa gàjàrtaa 'shortness'. cᵠinkèè 'a pointed object', *cᵠinkèè-ntakà cᵠinkàntakà 'pointedness'. zawrèè 'reception hall', *zawrèè na ᵠàlkaalii zawrèènᵠàlkaalii or zawrànᵠàlkaalii 'the judge's reception hall'.

/oo/ ∼ /wa/, /a/. *kᵠoor-yaa kᵠwaryaa 'a large calabash', pl. *kᵠoor-inà kᵠoorinà. mòòriyaa 'usefulness',*CVC-moor-aa mammooraa 'usefulness'. doogoo 'long', *doogoo na kᵠwàbrii doogwankᵠwàbrii 'a long shin'; *doogoo na guurìì doogoonguurìì 'a long hope'. tààkoo 'hoof', *tààkoo na kᵠafàà tààkoonkᵠafàà or tààkwankᵠafàà 'hoof of the foot'. ᵠidòò 'eye', *ᵠidòò na kᵠafàà ᵠidòònkᵠafàà or

---

[1] bar- is replaced by baŗ before / ⋕ /. The resulting baŗ is used throughout the paradigm, even when suffixes in close juncture follow.

ʔídwànkʔafàà 'ankle' (lit. 'eye of the foot'), *ʔidòò na màagee ʔidòòmmàagee 'a kind of shiny green bead' (lit. 'cat's eye').

Note: This change of phonemes takes place after the replacement by palatalization in 2.2.2 so that, for example, dàšee [*dàs-ee] 'transplanting' retains the phoneme /š/ in *dàšee na ʔiccèè dàšanʔiccèè 'the transplanting of a tree'.

2.2.8. Morphophonemes E, (e), O, A, I. These occur in verb bases of CVC pattern.

E is replaced by /ii/ before -aa (noun base formative, 3.2.3), by /ee/ elsewhere: fEdʔ- 'to flay', *fEdʔ-àà fiidʔàà 'flaying', *ma-fÊdʔ-ii mafèèdʔii 'flayer, pl. mafèèdʔaa. fEr- 'to chip bits from', *fEr-àà fiiràà 'chipping bits from', *ma-fÊr-ii mafèèrii 'one who decorates calabashes by chipping off little bits', *fÊr-ee šinà fèèreenduucʔìì 'he's chipping rock'.

(e) is replaced by /ii/ before -aa (verb stem formative, 4.1.2), by /ee/ elsewhere: ʔ(è)b- 'to take from', *ʔ(e)b-àà yaaʔiìbàà 'he fetched a little', *ʔ(è)b-ee/-i yaaʔèèbeešì 'he fetched a little of it' kàʔèèbì ruwaa 'fetch a little water!' ('fetch' in these examples means 'take some from', as water from the well).

O is replaced by /uu/ before -aa, -aCCee (noun formatives, 3.2.3), by /oo/ elsewhere: kOk- 'to cry', *kOk-aa kuukaa 'crying', *ma-kOk-ii makookii 'house of mourning', *kOk-àà 'to cry' (verb stem) yaakookàà 'he cried'. kOdʔ- 'to sharpen a tool', *kOd-àà kuudʔàà 'sharpening a tool', *kÔdʔ-aCCee kùùdʔaddʔee 'a sharpened one', *ma-kÔdʔ-ii makòòdʔii 'one who sharpens tools', *kOdʔ-àà (verb stem) naakoodʔààta 'I sharpened it'.

A is replaced by /i/ before -ii (noun formative, 3.2.3), by /a/ elsewhere: kAs- 'to kill', *kAs-ìì kišìì 'killing', *kAs-èè (verb stem) yaakašèèši 'he killed him'. rAs- 'lack' (BD), *rAs-ìì rišìì 'lack' (noun) as in màyrišinkunyà 'one who lacks shame, shameless person', *rAs-àà (verb stem) yaarasààni 'he lost me'. kAdʔ- 'to beat' *kAdʔ-ìì kidʔìì 'beating', *ma-kÀdʔ-ii makàdʔii 'one who beats'.

I is replaced, apparently optionally, by /u/ or /i/: rIf- 'to cover', *rIf-àà (verb stem) rùfaani dà bàrgoo 'cover me with a blanket', *rIf-èè (verb stem) naarifèè gìdaanaa 'I closed my house', *rIf-ee (verb stem) ʔinà soombàrgoo šìrìfeeni 'I want a blanket to cover me', rùfeeni 'cover me!', *rIf-aa 'covering' màyrufaʔʔidòò 'sleight of hand expert' (lit. 'eye-closer').

2.3. Variants of individual morphemes.

2.3.1. Noun variants before open juncture. Some nouns have more than one base used in parallel. Such are: làadan, làadaanì 'muezzin'; làadan, but not làadaanì, may also be used as a personal name. lìyar, lìyaarì 'Maria Theresa dollar' (BD). šàrìf, šàrìifì 'one who claims descent from Mohammed' (BD). mùtum, mùtumì 'person'. The forms in -ì are found before na, as mùtumìndaajìì 'bushman'. ʔarnèè pl. ʔarnaa, ʔannèè pl. ʔannaa 'pagan'. (Replacement of /r/ by /n/ before /n/ may belong on the phonologic, not the morphemic, level.) ʔabdùgàà, ʔaddùgàà 'cotton'.

2.3.2. Noun variants before affix juncture /-/. A large number of morphemes have replacement forms before affix juncture. The following were noted: ʔàbookìì 'a friend' ∼ (is replaced by) ʔabuk- before -ay: ʔàbùkay 'friends', by ʔabu- before -taa: ʔàbùtaa 'friendship', optionally by ʔab- before -iyaa: ʔàbookiyàà

'friend' (f.) and *ʔàbiyàà* (*ʔàbiyàà* is to be preferred, as *ʔàbookiyàà* has bad connotations; this is reversed in some dialects). *ʔàkwiyàà* 'she goat' ∼ *ʔaawk-* before *-ii* (pl.): *ʔaawaakii* 'she goats'. *dookìì* 'horse' ∼ *daawk-* before *-ii* (pl.): *daawaakii*. *buuzuu* 'runaway Tuareg slave' ∼ *bugz-* before *-ee* (pl.): *bugààjee*. (For the last three examples see 3.6.4, 5.) *dʔaa* 'child' ∼ *ʔy-* before *-aa* (pl.): *ʔyaaʔyaa*. *falkee* 'trader' ∼ *fatk-* before *-ee* (pl.): *fatààkee*. *kaỳ* 'head' ∼ *kaan-* before *-uu* (pl.): *kaanuu*. *kudʔii* 'money' ∼ *kurdʔ-* before *-aayee* (pl.): *kurdʔààyee*. *muugùù* 'evil one' ∼ *mugu-* before *-nyaa* and *-ntaa*: *mugunyàà* 'evil one (f.)' *mùgùntaa* 'evil'. *saà* 'ox' ∼ *saan-* before *-uwaa*: *saanùwaa* 'cow', *šaan-* before *-uu* (pl.): *šaanuu* 'cattle'. *sarkii* 'king' ∼ *saràw-* before *-niyaa* and *-taa*: *sàrawnìyaa* 'queen', *sàrawtàà* 'government'. *sarmàyii* 'young man' ∼ *samaar-* before *-ii* (pl.): *sàmààrii*. *šèètan* ∼ *šeedʔan-* before *-Cuu* (pl.): *šèèdʔànnuu*. *waà* 'older brother' ∼ *yayy-* before *-ee* (pl.): *yayyee*. *zazzàw* 'Zaria' (place name) ∼ *zazzag-* with *ba—ee* and *-aawaa*: *bàzazzagèè* 'native of Zaria', pl. *zazzagaawaa*.

2.3.3. Pronoun alternants. The following chart gives the variants of the personal pronouns (and the impersonal *ʔa*). No form is given twice, a blank indicating that the form is the same as the last given. A dash indicates that the form does not occur (was not recorded) in that position. In this way each form and its uses are readily seen. For example *ta* is used before *na* and *kèè*, sometimes after verbs, and after *na-*. For *šii* (and *ʔa*) optional variants are given and the occurrence or non-occurrence of each plotted. An asterisk indicates that the tone varies and is determined by the context. Otherwise the tone is given by the spelling of the form in the chart.

An interesting line of division is that between the pronouns in Group 2 which add a vowel and those which add an *n*. The forms of those with *n* are more regular throughout than those with double vowels. The impersonal *ʔa* has both and forms a separate classification. The order of pronouns in the chart is on the basis of this division. *ʔita* and *kay* are placed next to the *n* group because of the similar distribution of variants.

Groups 2, 10, 11 refer to variants before verbs. These variants are pronominal prefixes, forming the different tenses or aspects of the verb. The tense or aspect is indicated by the pronominal accent pattern, which also conditions the form of the pronoun. These accent patterns are: ´ ´ perfective, ˊ ˋ future, ˋ optative. ˋ is used with the negative *bà* (11) for negative perfective and with *zaà-* (11) for future. Note that in this analysis there is no 'present' or 'progressive' tense or aspect of the verb. This is analyzed as a pronoun-*na*-noun construction and represented by Group 3 pronouns plus *na* plus a noun. (See 2.3.4)

## Chart of Pronoun Alternants[2]

| | 'I' | 'he' | | 'she' | 'you' (sg.m.) | 'you' (sg.f.) | 'we' | 'you' (pl.) | 'they' | impers |
|---|---|---|---|---|---|---|---|---|---|---|

[2] A pronoun chart based on Abraham (MGSH) may be added for comparison:

| | 'I' | 'he' | | | 'she' | 'you' (sg.m.) | 'you' (sg.f.) | 'we' | 'you' (pl.) | 'they' | impers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | nii | — | šii | — — — | — — — | ʔita | kay | — kee | — | muu kuu suu | — |
| 2. | — | — — — — | — | ỳ | — — | — — — | — — | — — | — | — | — |
| *3. | naa | — — — — | yaa | — — — | taa | — kyaa | — | maa kwaa saa ʔaa |
| 4. | | — — — — | — — — | | — kin | — | mun kun sun ʔan |

| 1. | nii | šii | — | — | ʔita | kay | kee | muu | kuu | suu | — | — |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *2. | naa | — | yaa | — | taa | kaa | kin | mun | kun | sun | ʔan | ʔaa |
| 3. | ʔi | ši | ya | yi | ta | ka | ki | mu | ku | su | — | ʔa |
| 4. | ni | | | | | | | | | | — | |
| 5. | | | — | — | | | | | | | — | — |
| *6. | zero | | — | — | | | | | | | — | — |
| 7. | wa | ši | — | — | tà | kà | kì | mù | kù | sù | — | — |
| 8. | nì | | — | — | | | | | | | — | — |
| 9. | | | yà | — | | | | | | | — | ʔà |
| 10. | ʔìn | | — | | | | | | | | — | |
| 11. | ǹ | — | ỳ | — | | | | | | | ʔàn | |
| 12. | — | — | | — | — | — | — | — | — | — | — | — |

Context:

1. in #P#, before -nee.
2. with ' ', ' ' before verbs.
3. before na
4. before kèè, kà
5. Sometimes after verb.
6. after na
7. after na-.
8. after ma-, sometimes after verb.
9. after baà, zaà.
10. with ' before verbs.
11. with ' after bà- and zaà- before verbs.
12. after mà-.

Examples (in paradigm form where convenient):

1. kùzoo dà nii 'come with me'. niinèè 'it's I'. naagàmu dà šii 'I met (with)

| 5. | ni | na | | ya | — | yi | i | ta | ka | —ki | — | mu | ku | su | ʔa |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6. | — | | — | — | — | — | — | — | | —ki | — | | | | |
| 7. | — | | — | — | — | — | — | — | | — | — | | | | |
| 8. | — | ši | — | — | — | — | — | — | | — | — | | | | |
| *9. | — | | — | — | — | — | — | — | | — | — | | | | — |
| 10. | n | | — | — | — | — | — | — | | — | — | | | | |
| 11. | nì | ǹ | sì | sà | s | — | | — | — | tà | kà | a | kì | a | nà | kù | sù | — |
| 12. | — | | — | — | — | yà | — | yì | ì | | | — | | — | mù | | | ʔà |
| 13. | — | | — | — | — | — | — | | | — | — | | | | |
| 14. | — | | — | — | — | — | — | | | — | — | | | | |
| 15. | zero | | — | — | — | — | — | | | — | — | | | | — |
| 16. | wa | | — | — | — | — | — | | | — | — | | | | — |

Uses and references:

1. Before #. Independent pronoun. MGSH 30.
2. After mà-; MGSH 33.
3. With " after baa, with " before verbs; MGSH 15, 74, 154.
4. With " before verbs; MGSH 11, 12, 154.
5. Before kèè, kè; MGSH 85, 155.
6. Before kà (kì to ʔa) or verb (na to ka); MGSH 85f, 156.
7. Before kàn; MGSH 13, 154.
8. After (as alternate) baà, zaà; MGSH 14, 15, 17.
9. After verb; MGSH 32.
10. Before nàà; MGSH 14, 155.
11. After ma-; MGSH 32.
12. With ' before verbs; MGSH 12, 13.
13. After zaa- (zaà-); MGSH 13.
14. After bà; MGSH 16.
15. After na, ta; MGSH 30.
16. After na-; MGSH 31.

him'.   *kòòmoo ʔita* 'like her'.   *kay kaasanšì* 'you know him'.   *kee kinsaniì?* 'do you (f.) know?' *mùtumìnkòòmoo muunèè* 'they are men like us'. *nii ʔinà tàmaaniì // kòòmoo kuu biyuunèè* 'I thought there were two of you'. *yaayi màgànà dà suu* 'he talked with them'.

2. Verb prefixes (tone patterns ʹ, ʹ ʹ).   5. Verb object (8. Verb object with low tone, optional).   No particular order is used with the pronoun objects. The order of prefix forms is the traditional one.

| | |
|---|---|
| *naakaamààši* 'I seized him' | *munkaamààsu* 'we seized them' |
| *kaakaamààni* 'you seized me' | *kunkaamààmu* 'you (pl.) seized us' |
| *kinkaamààta* 'you (f.) seized her' | |
| *yaakaamààka* 'he seized you (m.)' | *sunkaamààku* 'they seized you (pl.)' |
| *ʔaakaamààši* 'he was seized' | *ʔanhàyfeenì* 'I was born' |
| *naǹkaamààši* 'I'll seize him' | *muǹkaamààsu* 'we'll seize them' |
| *kaǹkaamààni* 'you'll seize me' | *kuǹkaamààmu* 'you (pl.) will seize us' |
| *kiǹkaamààta* 'you (f.) will seize her' | |
| *yaǹkaamààka* 'he'll seize you' | *suǹkaamààku* 'they'll seize you (pl.)' |
| *taǹkaamààki* 'she'll seize you (f.)' | |
| *ʔaàyiìšì* 'it will be done' | |

3. Pronoun-*na*-noun

| | |
|---|---|
| *ʔinà zuwà* 'I'm coming' | *munà zuwà* 'we're coming' |
| *kanà zuwà* 'you're coming' | *kunà zuwà* 'you (pl.) are coming' |
| *kinà zuwà* 'you (f.) are coming' | |
| *šinà (yanà, yìnà) zuwà* 'he's coming' | *sunà zuwà* 'they're coming' |
| *tanà zuwà* 'she's coming' | |
| *ʔanà ruwaa* 'it's raining' | |

4. Pronoun plus *kee* or *ka* (rare)

| | |
|---|---|
| *hakàà nikèè* 'thus I am' | *hakàà mukèè* 'thus we are' |
| *bisà kakèè* 'you are on top' | *hakàà kukèè* 'thus you are' |
| *hakàà kikèè* 'thus you (f.) are' | |
| *hakàà šikèè (yakèè, yikèè)* 'thus he (it) is' | *ʔàbin//dà sukèè yiì* 'the thing they're doing' |
| *takèè bidʔaa* 'she's hunting' | |
| *kʔàà ʔakèè kirankà* 'what (how) are you called?' | |
| *sukà taaràà* 'they assemble' | |

6. *na* and *ta* plus pronoun (see 2.3.4).

| | |
|---|---|
| *ʔùbaanaa* 'my father' | *ʔùwaataa* 'my mother' |
| *ʔùbankà* 'your father' | *ʔùwakkà* 'your mother' |
| *ʔùbankì* 'your (f.) father' | *ʔùwakkì* 'your (f.) mother' |
| *ʔùbanšì* 'his father' | *ʔùwašši* 'his mother' |
| *ʔùbantà* 'her father' | *ʔùwattà* 'her mother' |
| *ʔùbammù* 'our father' | *ʔùwammù* 'our mother' |
| *ʔùbankù* 'your (pl.) father' | *ʔùwakkù* 'your (pl.) mother' |
| *ʔùbansù* 'their father' | *ʔùwassù* 'their mother' |

Tone on all but *naa* and *taa* may be high or low.   It is usually low.

7. After *na*-.   (see 2.3.4).

*nàáwa* 'mine (man speaking)'           *naamù* 'ours'
*tàáwa* 'mine (woman speaking)'
*naakà* 'yours (possessor sg. m.)       *naakù* 'yours (possessor pl.)'
*naakì* 'yours (possessor sg. f.)
*naašì* 'his'                            *naasù* 'theirs'
*naatà* 'hers'

8. After *ma-, gàree*, sometimes after verb (see above under 2).

*manì* 'to me'                           *mamù* 'to us'
*makà* 'to you'                          *makù* 'to you' (pl.)
*makì* 'to you' (f.)
*mašì* 'to him'                          *masù* 'to them'
*matà* 'to her'
*kàbaani ʔàràntakà gàreekà* 'loan        me
                                  something
                                  of yours'
*kudʔii nawà gàreešìʔ* 'how much money
                       does he have?

9. After *baà, zaà-*.

*baànì zuwà* 'I'm not coming'            *baàmù zuwà* 'we're not coming'
*baàkà zuwà* 'you're not coming'         *baàkù zuwà* 'you (pl.) aren't coming'
*baàkì zuwà* 'you (f.) aren't coming'
*baàšì (baayà) zuwà* 'he's not coming'   *baàsu zuwà* 'they're not coming'
*baàtà zuwà* 'she's not coming'
*baàʔà saà makà surdìì* 'a saddle won't
                       (i.e. can't) be
                       put on you'

*zaànì* 'I'm going'                      *zaàmù* 'we're going'
*ʔìnaa zaàkàʔ* 'where are you going?'    *zaàkù* 'you're going'
*zaàkì* 'you (f.) are going'
*zaàšì (zaàyà)* 'he's going'             *zaàsù* 'they're going'
*zaàtà* 'she's going'
*zaàʔà yaakʔìì* 'there'll be war (lit. one
                 will fight)'

10. With ʽ before verbs.[3]

*ʔìnzoo* 'that I come'                    *mùzoo* 'that we come'
*kàzoo* 'that you come', 'come!'          *kùzoo* 'that you (pl.) come', 'come!'
*kìzoo* 'that you (f.) come', 'come!'
*šìzoo* 'that he come'                    *sùzoo* 'that they come'
*tàzoo* 'that she come'
*ʔàgoodèè makà* 'thank you' (may  one
                 thank you)

Examples in context: *mùbar fadʔàà wannàn* 'let's leave (i.e. quit) this fighting'.
*yaaceè // kùbarᵢ ʔaykìngoonaa // kùzoo dà nìì* 'he said "Leave the working of
the farm.    Come with me" '.

11. With ʽ after *bà-* and *zaà-* before verbs.

---

[3] This is the form used after *kadà*.

*bànzoo ba* 'I didn't come'                *bàmùzoo ba* 'we didn't come'
*bàkàzoo ba* 'you didn't come'             *bàkùzoo ba* 'you (pl.) didn't come'
*bàkìzoo ba* 'you (f.) didn't come'
*bàyzoo ba* 'he didn't come'               *bàsùzoo ba* 'they didn't come'
*bàtàzoo ba* 'she didn't come'
*bàʔànkwaanaa dà muu ba* 'they didn't
                            sleep with
                            us', 'we
                            weren't
                            slept with'

With *zaa-* examples were not so common.
*mìì zaàn̄yi* 'what should I do?'            *zaamùwankèè zanì* 'we'll wash the
                                                          clothes'

*mììneenèè // zaàkàyi?* 'what are you go-    *mììneeèè // zaàkùceè* 'what will you say?'
                    ing to do?'
*zaàyhàbreekà* 'he'll kick you'             *zaàsùkašèèší* 'they'll kill him'
*zaàʔàkašèèší* 'he will be killed'

12. Only two pronominal forms occur after *mà-*: *ỳ* and *sù*. The combination *mày-*, pl. *mààsù-*, means 'one who has', followed by a noun or its equivalent. E.g. *màymantuwaa* 'one who has forgetfulness', i.e. 'a forgetful person', pl. *mààsumantuwaa*; *mààsùkašèè mutààneenèè* 'they're people who kill men'.

2.3.4. *na, ta.*[4]

Using the symbol C[1] for a consonant identical with the following consonant and a hyphen to indicate affix juncture, we have these forms and constructions.

*na*:              noun *n* noun / pronoun / phrase
      pronoun / noun *nà* noun / adverb / phrase
                     *nà* noun
                     *na-* noun
                     *nàà-* pronoun *nii*
         m.  noun *naa* pronoun *nii*
             *naa-* pronoun other than *nii*
*ta*:              noun C[1] noun / pronoun / (phrase)
                     *ta-* noun
                     *tàà-* pronoun *nii*
         f.  noun *taa* pronoun *nii*
             *taa-* pronoun other than *nii*

These may be stated:
   *na* is *nàà* in the sequence *na-* + pronoun *nii*
         *naa* in the sequences m. noun + *na* + *nii*, *na* + pronoun other than *nii*
         *na* (accent variable) in the sequence *na-* + noun
         *nà* (accent invariable) in the sequences pronoun *na* + N, *na* + noun,
              and optionally in other NnaN constructions
         *n* in all other NnaN.sequences
   *ta* is *tàà* in the sequence *ta-* + pronoun *nii*
         *taa* in the sequences f. noun + *ta* + *nii*, *ta-* + pronoun other than *nii*
         *ta* in the sequence *ta-* + noun

---

[4] See MA.

C¹ in NtaN sequences

Examples (listed according to the first chart) are:

n    *bàbbans²uns²uu* 'big bird' (*bàbba* 'a big one, *n* 'of' *s²uns²uu* 'bird').
     *²àbookinši* 'his friend' (*²àbookii* 'friend', *n* 'of', *ši* 'him'). *nii bànkulàà
     bà* // *²àbin*//*dà suncèè* 'I don't care what they say' (*²àbi-* 'thing', *n* 'of',
     *dà* 'that, with' *suncèè* 'they said').

nà   *šinà ²ìgiyà* 'he makes rope' (*šii* 'he', *nà*, *²ìgiyà* 'rope'). *baaree nàduuniyà*
     'stranger in (*nà*) the world'. *šinà ²ìnaa* 'where is he?' (lit. 'he of where').
     *šinà dà kud²ii dà yawà* 'he has a lot of money' ('he', *nà*, *da kud²ii dà yawà*
     'with a lot of money'). *bàà nàfatalwaa ba* 'it's not supernatural' (*bàà . . . bà*
     'it's not', *nà* 'of', *fatalwaa* 'a ghost').

na-  *koomii nà duunìàà* // *namaataanèè* 'everything in (*nà*) the world pertains
     to (*na-*) women'.[5]

nàà- *nààwanèè* 'it's mine' (*nà* 'of', *nii* 'I', *nee* 'it is'; *nii > wa* after *na-*).

naa  *²ùbaanaa* 'my father' (*²ùbaa* 'father, *na* 'of', *nii* 'I'; *nii >* zero after *na*).

naa- *baàkà da naakà* // *say nawani* 'you have nothing of your own (*naakà*)—
     just that which belongs to someone else'. *wannàn* // *naakìnee* 'this is
     yours (possessor feminine)'. *naaší* 'his'.

Variants of *ta*:

C¹   *hanyàjjirgii* 'railroad track' (*hanyà* 'road', *ta* 'of', *jirgii* 'train').
     *màganàttùùràdwaa* 'European language' (*màganà* 'speech', *ta* 'of', *tùùràdwaa*
     'Europeans'). *²ùwakkà* 'your mother' (*²ùwaa* 'mother', *ta* 'of', *ka* 'you').

ta-  *tagàri* 'a good woman'

tàà- *tààwacèè* 'it's mine' (possessed feminine)

taa  *d²ìyaataacèè* 'she's my daughter' (*d²ìyaa* 'daughter', *ta'* 'of', *nii* 'I'—here
     zero, *cee* 'is (f.)')

taa- *taakà* 'yours' (possessor masculine, possessed feminine),
     *taakì* 'yours' (possessor and possessed both feminine), etc.

Note: Only *na* occurs after a pronoun or a plural noun.

2.3.5. The indefinite *wa-*. There are a number of words in which a morpheme
*wa-* is found. This *wa-* has a plural *wa²à-* or *wad²à-*. Compare:

*wani* 'someone' f. *wata*, pl. *wa²ànsu, wasuu*

*wànì* 'which?' f. *wàtà* (pl. not noted)

*wànèè* 'which?' f. *wàcèè* (pl. *wàd²ànnèè* —BD)

*wan²ìn* 'that one' (f. *wa²in*, pl. *wa²an²ìñ*—BD)

*wannàn* 'this one' (pl. *wad²ànnàn*—BD)

*wannàñ* 'the other one' that one' pl. *wa²ànnan*

As noted, some forms were supplied from Bargery with spelling modified. The
feminine form *wa²ìn* might possibly be *wa²²ìn*, that is, have the morpheme *ta*
(C¹ = *²* before *²*). Compare the masculine *wa-n-²ìn* with *wa-n-cañ* below and
feminine **wa-²-²in* with *wa-c-cañ*. Bargery also has (for the Katsina dialect):
*wancañ* 'that one' f. *waccan* pl. *wàd²àncàn*

Some of the above list of forms transparently contain *na* or *ta*:

[5] The distinction between *nà* and *na-* (*tà* and *ta-*) is based mainly on the words *nagàri,
tagàri, nàgàrtaa*. The difference in tone apparently supports the distinction maintained
in MA, but the two may be the same (or may be differentiated on different grounds). The
difference should not be pressed without further study.

*wa-n-ʔìn* (compare *ʔìn* 'there'), *wa-n-nàn* (*naǹ* 'here'), *wa-n-naǹ* (*nan* 'there'), the plurals being *waʔà-n-ʔìn*, *waʔà-n-naǹ*, *waʔà-n-nan*.   *wànèè* and *wàcèè* are *wa*-plus *-nee*, *-cee* (the same morphemes as *nee* 'is (m.)', *cee* 'is (f.)'?); *wata* (also *wàtà*) is *wa-ta* (*ta*, 2.3.4); *waʔànsu* is *waʔà-na-su* (*na*, 2.3.4, *suu* 'they') and *wasuu* *wa-suu*.   Bargery gives also *wasuu*, which would be *wa-s-su* (*wa-ta-suu*).   We have left *wani*, *wànì*, for which no analysis is apparent, unless *ni* be a morpheme alternant of *na*.   *wani* has a varient *wan* before *dà*: *koowandà* 'whoever . . .'.

Since the morpheme *wa-* has gender (both m. and f.) and number and appears to occur only before *na*, *ta*, *nee*, *cee*, it may be classed as a pronominal bound form.[6]

2.3.6. Interrogative pronouns *mìì*, *wàà*.   The following forms were recorded:
*wàà* 'who', m. *wàànèè*, f. *wààcèè*
*mìì* 'what', also *mìïnèè*
We have the same *-nee*, *-cee* as after *wa-*.   The compounds *wàànèè* and *mìïnèè* are often found before *-nee* 'is' and *wààcèè* before *-cee* 'is': *wààneenèè*, *wààceecèè* 'who is it?', *mìïneenèè* 'what is it?'.[7]

*wàà* and *mìì* are replaced by *waa*, *mii* (high tone) after *koo*: *koomii* 'everything', *koowaa* 'everybody'.   Whether *waa* is the same morpheme as the *wa-* of 2.3.5 is unclear but certainly possible.

2.3.7. Verb *yi*.   In the sequence /nyi m/ *yi* is replaced by zero with resultant close juncture between /n/ and /m/: /mm/.   This is an optional but nevertheless usual replacement.   Examples: *summašì bʔànnaa* for *sunyi mašì bʔànnaa* 'they caused him damage'; *summàganà* for *sunyi màganà* 'they talked'.

2.3.8. Negative *baa*.   The negative morpheme *baa* has the following variants (partially conditioned by syntactic replacement possibilities):

*baà*          in *baa*-pronoun
*bàà . . . ba*    in *baa* plus noun or pronoun when replaceable by noun (or pronoun) plus *nee/cee*
*baà* or *baabù*  in *baa* plus noun elsewhere
*bà . . . ba*    in *baa*-pronoun (+')- verb

Where there is a second *ba*, it is enclitic, following the tone of the preceding morpheme.   Examples of these variants are:

*baà*-pronoun.   *dà ṛaanaa baàšì gani // dàdà daree šinà gani.*   'he doesn't (can't) see by day, but he sees by night'.   *baàšì naǹ* 'he's not here'.

*bàà* pronoun *ba*.   *bàà šiinèè yaadʔàwkì jirgii ba* 'it wasn't the that took (literally) the train'.   This is replaceable by *šiinèè yaadʔàwkì*, etc.   *bàà* noun *ba*.   *kàree // bàà zumùnkuuraa ba.*   'the dog is not the hyaena's friend'.   (Compare *kàree zumùùnee* 'the dog is a friend'.)

*baà* and *baabù* with nouns elsewhere seem to be interchangeable.   *baabù zaalumcìì ʔà sʔàkaaninsù* 'there's no rivalry between them'.   *kàree dà kuuraa // baabù ʔàmaanàà.*   'with the dog and the hyaena there's no peace'.   *kaakašèèši // baà jinii* '(if) you kill him, there's no blood'.   *jikinšì // baà jinii.*   'there's no blood in its body'.   *wurii wannàn // baabù kùṛan.*   'there was no Koran in that place'.

*bà*-pronoun-verb *ba*.   *nii bàngani ba // hakàà suncèè.*   I didn't see it; that's what they said'.   See 2.3.3 (No. 11).

---

[6] Compare SH 79, 80.

[7] The final low of *-eè* goes to the *-nee* or *-cee*, which otherwise has the opposite tone to that of the preceding morpheme final.

# CHAPTER III

## MORPHOLOGY OF THE NOUN

3.1. Introduction.

3.1.1. Bases. Since nouns have bases derived from verbs as well as straight nominal bases, a word must be said concerning the nature of these types of morphemes. As seen in 2.1, there is a fundamental difference between them. The noun base is complete with tone pattern and becomes a 'word' (the singular) before open juncture / ⚹ /. All affixes are attached directly or indirectly to this base, usually with loss to the original base. The base is hypothetical only in regard to morpheme variants, the rules of which are not operative until the morpheme is before open juncture. Verbs, on the other hand, have as bases toneless forms ending in affix juncture / — /. This base is hypothetical, having been abstracted from existing forms, and from it all forms may be made by the addition of affixes (tones, endings, etc.). The verb stems (base plus [prefix plus] tone plus ending) are regular, and these are the forms which correspond to the noun base in usage, i.e. they may occur before / ⚹ /. But in word formation the noun base is treated in a way parallel to the verb base, not to the verb stems. All affixes are added respectively to noun base or verb base (though they may be applied in different levels).

3.1.2. Tone. Nouns and verbs also differ in the nature of the tone patterns applied to them. Noun tone patterns may be represented in a simplified form, since most of them pattern as though beginning from the end of the word. The last tone given (reading from right to left) is the tone of all preceding syllables. In this way the patterns ` ', ` ` ', ` ` ` ' may all be represented by ` ', e.g. *fàdrii* 'locusts', *jìmìnay* 'ostriches', *cʔàdàrdkay* '(a certain kind of) snakes'. In any tone pattern (noun or verb) two like tones on a geminate vowel are treated as one tone (*fàdrii* has pattern ` ', not ` ` ` '). If the last two tones are high and the rest low, ` ' ' is written, e.g. *bʔàreewaa*. To indicate all tones high, ' ' is used, though this could have been represented by ' alone. E.g. *maataa* 'women', *bušiyaa* 'hedgehog'. ' ` indicates all high until the last tone, e.g. *kʔanèè* 'younger brother', *baranyàà* 'servant girl', *karnukà* 'dogs'. As many tones are given as necessary. This sometimes means the whole pattern of the word, but oftener it may be abbreviated: ` ` ` ' for *ʔàlbarkàcii* 'blessing' but ` ' for *càkwàykwàyay* 'starlings'. One pattern, with first and last syllables high and all intermediate ones low, is most conveniently represented by ' ` (')', the (') representing the possibility of an indeterminate number of other medial low syllables (examples 3.2.3, 3.6.2, 5). In contrast the verb tone pattern indicates a whole set of patterns (see 4.5), nor is it convenient to use abbreviated symbols. However, a deverbal noun (see 3.2.3) acts as any other noun in regard to tone.[1]

---

[1] This discussion has not taken into consideration variation in noun tone patterns. Compare PH 33, 34, MGSH 18, 19. The two nouns noted with all low tones (*ʔàbù, màcèè*) are *ʔàbu, màcee* when before pause and before *nee, cee*. Before *na, ʔàbù* is replaced by *ʔàbi*. Such changes may well be relegated to Chapter 2 as phonologic phenomena or morpheme

3.1.3. Levels of formation. There are two levels of noun formation, stem formation and affixes to the stem. The stem is the foundation of all word final affixes to nouns. On this stem level we have two types, noun bases as stems and extended stems. The noun base is made up of the linear phonemes plus the tone pattern of the singular. Noun forms are given as occurring before / # /, so that the rules of chapter II are operative. Where a hypothetical form is necessary, it is indicated with an asterisk (*). Extended stems are only found with affixes (see 3.6).

3.1.4. Forms of the stem. The following forms of the stem occur:

I. Base as stem
  A. Noun bases
    1. Simple noun
    2. Noun bases from verb bases
      a. Verbal nouns (nouns identical in form with verb stem)
      b. Deverbal nouns (formed from the verb base by the addition of tone patterns and endings)
  B. Extended noun bases
    1. Reduplicated bases (with change of tone pattern)
      a. Complete reduplication
      b. Reduplication after loss of final vowel
    2. Prefix formations
      a. *ba-*
      b. CVC- (3 mora)
    3. Suffix formation -CVC
II. Extended stems (bases after loss but with addition before the affixes are added)
  A. Complete reduplication replacing the final vowel of the first element by *-aa-*
  B. Prefix formations
    1. *ba-*
    2. *ma-*
    3. CVC-
  C. Infix formations
    1. Reduplication (3 mora)
    2. Replacement vowels
  D. Suffix formations
    1. *-t-*, *-nt-*
    2. -C-
    3. Reduplication (3 mora)

Note that the prefix *ba-* is a formative element in both I. and II. The prefix *ma-* of II.B.2 is also an element in the formation of nouns from verb bases, I.A.2 (see 3.2.3).

3.2. Base as stem.

---

alternants. No observable regularity was noted to distinguish adverbial use of nouns, though tone varied in some cases: *gìdaa, gidaa*. Ordinarily tone phrase juncture precedes a noun used adverbially.

References in this chapter are mainly to Abraham (PH, MGSH). Most other works neglect tone, some even vowel length or other vital phonemic matters.

3.2.1. Simple noun. The simple noun forms by far the largest class of noun bases. Examples: *gaašìì* 'hair', *duucᵓìì* 'rock', *daree* 'night'.

3.2.2. Verbal nouns.[2] Of the nouns from verb bases we call those 'verbal nouns' which are identical in form with the stem of the verb. Verbs having the following tone sets and vowel suffixes may also use the stem of the verb (with the key tone pattern of the set, see 4.5) as a noun:

   ` ´ -ee, -aa, -i    ´ ´ -i, -aa    ` ´ ` -aa    ` ´ ´ -aa

E.g. *zààbᵓee* 'to choose one of a few', *ɾaanazzààbᵓee* 'day of choosing' (election day), *sunà zààbᵓeenšì* 'they are choosing him'. *cìkaa* 'to be full', *cìkaššèèkaràà* 'the filling (i.e. end) of the year'. *kᵓòòši* 'to be full', *kᵓòòšii* 'sufficiency', *kay baàkà dà kᵓòòšinkudᵓii* 'you don't have enough ('a sufficiency of') money'. *rìnjaayàà* 'to be lopsided, prevail (?)', *yaayi rìnjaayàà* 'it's become lopsided' (lit. 'it has made lopsidedness'). *gani* 'to see', *gani* 'seeing'. *sᵓuufaa* 'to become old', *kanà sᵓuufaa* 'you are getting old'. *gàwgàwtaa* 'to boast of ability not possessed', *kanà dà gàwgàwtaa* 'you have the habit of boasting of ability not yours'.

3.2.3. Deverbal nouns. Any of the above verb stems may be used as a noun, but often a deverbal noun is used instead (always for stems other than the above). These are formed by the addition of affixes to the verb base. The meaning sometimes departs from the meaning of the stem forms from the same base, although frequently they are used in connection with specific stems. In forming deverbal nouns from the base the following combinations of affixes were noted:

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ` ´  -ii, | -ee, | -uu, | -aa, | -oo, | -aw | | | |
| ´ `  -ii, | -ee, | -uu, | -aa, | -oo, | -woo, | -uwa, | | -zero |
| ´ ` ` | | | -aa | | ´ ` ´ | -uwaa | | |
| ` ´ ` | -ee | | -aa | | | | -iyaa, | -uutu |
| ` ´ ´ | | | -aa | | | -uwaa, | -iyaa, | -aCCee |
| ´ ´  -ii, | -ee | | -aa, | -oo, | -ay, | -uwaa | -iyaa, | ma - - V |
| ´ `(`) ´ | | | | | | | | ma - - ii |

Particular mention should be made of four of these since they are regular formations. These are ´ ` -zero, -aCCee, ´ ´ ma - - V, ` ` (`) ´ ma - - ii.

   ´ ` -zero is the regular formation of a deverbal noun from verb bases with stems of the tone sets ´, ´ 1, and ´ (`) (see 4.5.1, 2, 3). The nouns thus formed are masculine and when followed by *na*, the latter takes the low tone of the pattern. E.g. *cii-* 'to eat', *jii-* 'to perceive': *jìnkì yaafi cìnkì* 'perceiving you is better than eating you' (said of a *gààwasà* tree, which smells delicious when the fruit is ripening but is not yet good to eat). *šaa-* 'to drink', *šinà šàmbàarààsaa* 'he's drinking liquor'. *soo-* 'want', *mììneenèè // kanà soòᵓ* 'what do you want?'.

---

` ' ' -aCCee is a formation made from any verb base to indicate one upon which (or whom) the action of the verb has been taken. It is, then, equivalent to a perfective passive participle. For the feminine -aa and plural ' ' -uu see 3.5.2. Examples: tooy- 'to burn', tòòyayyee 'a burnt up one'; sˀay- 'to stand', sˀàyayyee 'a stubborn person'. For this same suffix used with simple noun bases see 3.5.1.

' ' (') ' ma - - ii forms agent nouns. For feminine -iyaa and plural -aa see 3.5.2. E.g. buus- 'to blow', mabùùšii 'one who blows, a flutist'; kooy- 'to learn, teach', makòòyii 'a learner, student'. This formation indicates a steady occupation in the action. For the same combination of affixes to noun stems see 3.6.2.

' ' ma - - V forms nouns of instrument from any verb base. The final vowel varies, being usually -ii, but also -aa. For plurals see 3.5.2. E.g. ma - - ii: šaar- 'to sweep', mašaarii 'an instrument with which to sweep'; burk 'to twirl', maburkii 'churning stick, firestick'. ma - - aa: buus- 'to blow', mabuusaa 'flute'; hayf- 'to bear (a child)', mahayfaa 'birthplace, uterus'.

The other deverbal nouns are made with varying degrees of regularity in relation to the verb stem. The following are examples of the combinations of tone pattern and final vowel formatives noted: (Numbers in parenthesis indicate numbers of examples recorded, when limited.)

' ' -ii: taaf- 'action with flat of hand or foot', tààfii 'palm, sole'. moosˀ- 'to make a rustling noise by moving about', mòòcˀii 'making a rustling noise by moving' (as of a snake or rat). -ee: das- 'to transplant', dàšee 'transplanting'. sˀay- 'to stand', sˀàyee 'being level, straight; standing'. -uu: ruugut- 'to write', rùùgùtuu 'writing' (later than the time of speaking, in contrast to ruugùtàà 'writing right away'). -oo: fas- 'to crack', fàsoo 'splitting', foor- 'to discipline', fòòroo 'discipline'. -aa: cir- 'to pull up by hand', cìraa 'pulling up by hand'. -aw: sayd- 'to sell', sàydaw 'one who sells'; ˀaykat- 'to work' (tr.), ˀàykat- 'to work' (tr.), ˀàykàtaw 'one who works something'.

' ` -ii: ˀask- 'to shave', ˀaskìì 'shaving' (used with verb stem ˀaskèè). -ee: roosˀ- 'to crack someone's head', roocˀèè 'cracking a head' (1). -uu: bug- 'to beat', bugùù 'beating'; daam- 'to bother', daamùù 'bothering'. -oo: ciiz- 'to bite', ciizòò 'biting'. -aa: fEkˀ- 'to sharpen', fiikˀàà 'sharpening'. -woo: kˀii- 'to hate', kˀiiwòò 'hating' (1). -uwa: z- 'to be on one's way', zuwà 'coming', used with verb stem zoo.

' ` -aa: saat- 'to steal', saàtàà 'stealing' (1).

' ` -uwaa: faadˀ- 'to fall', faadˀùwaa 'falling' (1).

' ' ' -ee: sˀugunn- 'to squat', sˀùgunnèè 'act of squatting' (used with verb stem sˀugùnnaa). -aa: kakkabˀ- 'to beat in order to knock something off the thing beaten', kàkkabˀàà 'beating (as above)' (used with verb stem kakkàbˀee). -iyaa: taf- 'to depart', tàfiyàà 'act of going' (used with verb stem tàfi). -uutuu: kˀull- 'to knot', kˀùlluutùù 'a knot, lump' (1).

' ' ' -aa: haraar- 'to stare hard at', hàraaraa 'staring hard at' (1). -uwaa: šaakˀ- 'to choke', šààkˀuwaa 'hiccups'. -iyaa: dˀoor- 'to put a load on someone', dˀòòriyaa 'a load' (1).

' ' -ii: sulbˀ- 'to slip off', sulbˀii 'slipperiness'. -ee: ˀamr- 'to marry', ˀamree 'act of marrying'. -aa: This form is very common and is used with a variety

of verb stems. *cʔaag-* 'to tear', *cʔaagaa* 'tearing', (used with verb stem *cʔaagèè*); *haw-* 'to mount', *hawaa* 'mounting' (used with verb stem *haw*); *gyaar-* 'to add to, to fix', *gyaaraa* 'an added bit; fixing, cleaning' (used with verb stem *gyaaràà*). *-oo*: *gooy-* 'to carry on the back' (as, e.g., a child), *gooyoo* 'carrying on the back' (used with verb stem *gooyàà*). *-ay*: *cʔeer-* 'to endeavour to surpass', *cʔeeray* 'endeavouring to surpass' (1). *-uwaa*: *gaan-* 'to find a lost object', *gaanuwaa* 'act of finding that which was lost' (used with verb stem *gaanèè*). *-iyaa*: *goot-* 'to go to one side', *goociyaa* 'going to one side, dodging'.

3.3. **Extended noun bases.** Many noun bases have extended as well as simple forms. A few hypothetical forms have the same type of extension and are included. These (e.g., *\*fikee*) have been abstracted from these formations and from their extended stem forms as being the common foundation of both. They do not constitute noun bases except in their extended form since they do not occur as simple base forms.

3.3.1. **Reduplicated bases.** These are simple bases reduplicated with loss of tonal pattern. A new tone pattern accompanies the reduplicated form. Examples of complete reduplication are: *ʔayàà* 'tiger-nut', *ʔàyààʔayàà* 'a similar but inedible plant'; *kʔibàà* 'fat', *kʔibààkʔibàà* 'a fat person'. Reduplication after loss of final vowel and tone pattern: *kʔayàà* 'thorn', *kʔàykʔay* 'anything which causes itching, chaff'.

3.3.2. **Prefix extensions of the base.** Of these we have two types, the morpheme *bà-* and reduplicative prefixes. *bà-* indicates 'a native of' or 'one possessing the quality of'. The former is more common. The base suffers no loss. (See 3.6.2 for this affix as an extension of the stem.) E.g. *gwaarii* (tribe name), *bàgwaarii* 'a Gwari'; *kanòò* (place name), *bàkanòò* 'a native of Kano'; *hagòò* 'left hand', *bàhagòò* 'a left-handed person.'[3]

CVC- (3 mora) reduplicative prefixes. These cause loss of tone pattern and ending (final vowel or *-iyaa*) to the base and are accompanied by tone pattern and final vowel. They are:

CVC- This reduplicates the first consonant and vowel of the base and doubles the original first consonant of the base. The tone patterns are ʼ ʽ with *-ee*; ʼʼ ʽ ʼ with *-aa*. E.g. *-ee*: *\*šikee, šiššikèè* 'a supporting timber (rafter, column)'; *\*fikee, fiffikèè* 'feather'. *-aa*: *sʔawrii* 'retarded growth', *sʔàssʔawraa* 'one of retarded growth'; *mòòriyaa* 'usefulness', *mammooraa* 'usefulness'; *gawcʔii* 'brittleness', *gàggawsʔaa* 'a brittle one'; *tawrii* 'toughness', *tàtlawraa* 'a tough person'. *muunìì* 'ugliness', *mùmmuunaa* 'an ugly person'. As seen by these examples, this affix usually indicates 'a person or thing of the quality of'. *mammooraa* is recorded in context parallel to *mòòriyaa* but no difference of meaning was noted.[4]

CVn- This reduplicates the first consonant and vowel and adds *-n-* before the simple base. Examples noted: *kʔumcii* 'dense brush', *kʔunkʔumcii* 'a narrow one or place'; *\*zaroo, zànzaroo* 'a wasp'.

CVl- This is the same as the last, but with *-l-*. From the two examples where the simple base is known, it seems to indicate 'one of the appearance of'. Examples noted: *\*gijee* (verb base 'to shake'), *gilgijèè* 'a cloud'; *\*piloo, pilpilòò* 'butter-

---

[3] Compare PH 34, 35, MGSH 61.

[4] Compare PH 43, MGSH 50.

fly'; *gaašìì* 'hair', *gàlgaasàà* 'hairy person'; *màataa* 'woman', *màlmaatàà* 'eunuch'.

3.3.3. Base extended by suffix.   Only one certain example has been noted. This is a reduplication of the last syllable (CVC) of the base after loss of final vowel and tone pattern.   A new tone pattern and final vowel are added with the suffix extension.   *ʔàljanaa* (or *ʔàljannà*) 'Jinn', *ʔàljanjànii* 'one possessed of Jinn'.

Extended stems.   Certain bases, after loss but before the addition of any affix to the stem, are extended in any one of several ways.   These are automatic additions to the stem and are not morphemes (since they have no meaning). As they occur only with affixes, they are discussed in full in the treatment of the relations of stems to affixes (see 3.6).

3.4. Affixes to the stem.

3.4.1. Loss to base.   All affixes cause loss to the stem.   This loss is of tone pattern and ending.   A tone pattern accompanies the affix to be added.   The loss of ending may be any one of the following:

-zero   *-ay*   *-iyaa*   *-waa*   *-in*
-V   *-yaa*   *-niyaa*   *-uwaa*   *-aya*

To the stem after loss the tone pattern and affixes are added.

3.4.2. Groups of related affixes.   The affixes are listed in full below (3.4.4), but a few related groups are noted here.

The abstract *-t-* group.   This group have *-t-* in common and are all in some sense abstract formations.[5]

*-taa*       *-ntaa*
*-taka*   *-ntaka*   *-antaka*   *-untaka*
*-cii*               *-ancii*   *-umcii*

E.g. *muugùù* 'an evil person, a bad one', *mùgùntaa* 'evil'; *nagàri* 'a person of good character', *nàgàrtaa* 'goodness'; *baawàà* 'a slave', *bàwtakà* 'state of being a slave'; *cʔinkèè* 'a pointed object', *cʔìnkàntakà* 'pointedness'; *saaboo* 'a new one', *sàabùntakà* 'an element of newness'; *daadʔii* 'pleasure', *dàadʔìntakà* 'pleasantness'; *ʔàlbarkàà* 'blessing', *ʔàlbarkàcii* 'blessing'; *tuuray* 'Europe', *tuurancii* '(any) European language'; *bààkʔoo* 'stranger', *baakʔumcìì* 'a stranger's manner'. The *-taka* is apparently an extended form of *-taa*.   The *-cii* is *-t-ii*.   Five of the forms have a nasal (*n* or *m*).   There seems to be no meaning difference between these and the others.   One stem cannot have both.   Possibly the base has a morphophonemic *-n* (compare -(n), 2.2.3).

Here also belong the stem extensions *-t-* and *-nt-* (see 3.6.5).   These were set up when the form of the word was that of one with a further affix based upon a *-taa* or *-ntaa* form, but the latter was not recorded (see 3.4.4).   Compare also the denominative verb formative elements *-at-*, *-nt-*, *-t-* (4.2.2).

The *-yaa* group.   These have *-yaa* in common and form nouns of feminine gender.[6]   Some have an *-n-* (compare the *-n-* above).

*-yaa*   *-iyaa*   *-nyaa*   *-niyaa*   *-inyaa*

E.g. *kàree* 'dog', fem. *kàryaa*; *ʔàbookii* 'friend', fem. *ʔàbookiyàà*; *baràà* 'servant',

---

[5] Compare HG 63–64, PH 36, 37, MGSH 59, 60, GHL 13, 14.
[6] Compare PH 28, 29, MGSH 45, 46, GHL 19, 50, 52, LHS 8–20, 22, 23, 26, 48–50.

*baranyàà* 'servant girl'; *màraayàà* 'orphan', fem. *màraynìyaa*; *yaaròò* 'boy', *yaarinyàà* 'girl'.

The *-n-* group. All these are plural except *-aanii*. Arranged according to the length of the vowel before *-n-* and the length of *-n-*, they are:

*-ina*      *-una*
*-annii*  *-annee*  *-annuu*  *-unnii*  *-unna*
*-aanii*  *-aanuu*

For examples see 3.5.1.

The *-y-* group. All these are plural, and all are rare except *-aayee*. For examples see 3.5.1.

*-iyya*  *-ayyii*  *-ayya*  *-ooyii*  *-aayee*

3.4.3. Relations of affixes to tone.[7] Some affixes may be accompanied by any one of a number of tone patterns, but most of them are restricted to one. Those found with several usually occur more often with one than with the others. Those noted with one pattern are:

```
ˋ ′    -ayyii    -aw       -uway              -akii   -akay
       -annii    -unnii    -annee    -annuu
ˊ ˋ    -ina      -una      -unna     -umcii
       -nyaa     -inyaa              -uka      -nuka
ˋ ′ ˋ  -taka     -ntaka    -antaka   -untaka
ˊ ˋ ′  -ayya     -aanuu
ˋ ′ ′  -aanii    -aCCee
ˋ ′ ′ ˋ -niyaa   -cii
ˊ ′    -ancii    -ooyii    -waa
```

For examples see 3.5. Many of those affixes which take more than one tone pattern have fixed tone patterns with extended stems (see 3.6).

3.4.4. Sequences of affixes. Affixes are of four types in relation to the stem and to each other:

1. Those attached only directly to the stem and which allow no other affix after them:

```
-taka     -ntaka    -antaka   -untaka   -ancii    -umcii
-niyaa    -yaa      -inyaa    -iyya     -ayya     -ooyii    -ayyii   -aayee
-waa      -uwaa     -uway
-ina      -una      -unna
-annii    -annee    -annuu    -unnii    -aanuu    -aanii
-akii     -kuu      -uka      -nuka     -akay     -aatuu
```

2. Those attached only directly to the stem but which may have another affix after them:

*-taa*  *-ntaa*  *-cii*  *-nyaa*  *-aw*

3. Those which may be attached after another affix and which may have another affix after them:

*-aCCee*  *-ii*  *-ee*

4. Those which may be attached after another affix but may have none following:

---

[7] Compare BD xxviii–xxix.

*-uu   -aa   -ay   -iyaa   -aawaa*

No stem may have more than one of any group at a time.  Any one of these affixes may follow the stem directly, and any may be final.

Since those of group one allow no other affixes, they are mutually exclusive of groups two to four.  However, a stem may have a member each from groups two to four, or it may have affixes from but two of the groups.  The possibilities are:

Combinations of groups two, three, and four:

2. *-taa, -ntaa*   3. *-ii*   4. *-iyaa, -aa*

E.g. *saaʔàà* 'luck', *sààʔantàà* 'luck', *masààʔàncii* 'one who is constantly lucky', fem. *masaaʔancìyaa*, pl. *masààʔàntaa* (note that this combination only occurs with stems extended by *ma-*).

Combinations of groups two and four:

2. *-cii*   4. *-ay*;   2. *-nyaa*   4. *-uu*;   2. *-aw*   4. *-aawaa*

E.g. *ʔàlbarkàà* 'blessing', *ʔàlbarkàcii* 'blessing' pl. *ʔàlbàrkàtay*; *baràà* 'servant', *baranyàà* 'maidservant' pl. *bàrànyuu*; *jaa* 'red one', *jààtaw* 'reddish person or beast' pl. *jaataawaa*.  There are the only examples noted.

Combinations of groups three and four:

3. *-aCCee*   4. *-aa, -uu*;   3. *-ii, -ee*   4. *-iyaa*

These refer to two common formations: *-aCCee* 'a person of the nature of' (see 3.5.1) and stem extension *bà-* 'a native of' (3.6.2).  E.g. *hàdʔamàà* 'greed', *hàdʔàmammee* 'a greedy person' fem. *hàdʔàmammaa*, pl. *hàdʔàmàmmuu*.  *tuuray* 'Europe', *bàtuurèè* 'a European' fem. *bàtuurìyaa*.   *-ii* is also found with stem extension *ma-* (see above).[8]

3.5. Relation of stem formations to affixes.  This may be summarily stated as follows:

I. Base as stem
  A. Noun bases
    1. Simple noun   —   any affix except *-kuu*
    2. Noun bases from verb bases
      a. Verbal   nouns   —   none noted
      b. Deverbal nouns   —   probably any (examples limited)
  B. Extended noun bases
    1. Reduplicated bases
      a. Complete reduplication   —   *-ay*
      b. With loss of final vowel   —   *-kuu*
    2. Prefix formations
      a. *ba-*   —   *-ay*
      b. CVC-   —   *-aa, -uu, -ay*

---

[8] These sequences would undoubtedly be changed in part and enlarged by further research (compare LHS 19, 20, where examples of further affixes, plurals of, *-taka* are given).

Previous discussions of affixes have been organized according to meaning—abstract, feminine, plural, etc.  References have been given for abstract and feminine formations.  For plurals see GHL 20–44, 50, 52 and for plurals of deverbal nouns 37, 38 (a large collection of formatives, unfortunately without tone or vowel length), HG 60–63, MGSH 39–41, BD xxviii–xxix (tone), LHS 8–20, 22, 23, 26, 48–50, WHS xviii–xx.  For a suffix *-di* to numerals see GHL 64.

3. Suffix formation -CVC   —   *-aa, -uu, -ay*
II. Extended stems
  A. Reduplication with replacement *-aa*
  B. Prefix formations
    1. *ba-*     —   *-ii, -ee*
    2. *ma-*   —   *-ii*
    3. CVC-   —   *-aayee*
  C. Infix formations
    1. Reduplication        —   *-ay*
    2. Replacement vowels   —   *-ii, -ee, -uu, -aa, -ay, -kuu*
  D. Suffix formations
    1. *-t-*     —   *-aw, -ii*
       *-nt-*   —   *-ii*
    2. *-C-*     —   *-aa, -ii, -ee, -uu, -ay, -uwaa*
    3. Reduplication   —   *-ii, -ee, -uu, -aa, -ay, -uwaa, -uka*

Although some affixes are regularly accompanied by certain tone patterns, as was stated above (3.4.3), no blanket statement can be made. Still less can any statement be made as regards the loss suffered by the base before the addition of any affix. The following list endeavours to give as complete a picture of the possible combinations as records permit. It is arranged according to the above table of bases and extended stems, listing what affixes may accompany each. The tone pattern of the new formation is given, followed by the loss of ending suffered by the base. Where less than five examples were noted, all are given and their number indicated to the right of the loss to the base.

3.5.1. Simple noun—possible affixes:

*-taka* ` ´ `, -V.  *baawàà* 'slave', *bàwtakà* 'state of being a slave'; *gàjeeree* 'a short one', *gàjàṛtakà* 'shortness'.

*-ntaka* ` ´ `, -zero.  *yawà* 'plenty', *yàwàntakà* 'plentifulness'; *baràà* 'servant', *bàràntakà* 'servitude'.

*-antaka* ` ´ `, -V.  *cʔìinii* 'a point', *cʔìinàntakà* 'pointedness'; *bakʔii* 'a black one', *bàkʔàntakà* 'state of blackness'.

*-untaka* ` ´ `, -V (2).  *saaboo* 'a new one', *sàabùntakà* 'an element of newness'; *sʔaawoo* 'length', *sʔàawùntakà* 'length'.

*-ancii* ´ `, -ay (1).  *tuuray* 'Europe', *tuurancii* 'a European language'.  ´ `, -V. *gwaarii* (tribe name), *gwaarancii* 'the language of the Gwari'.

*-umcii* ´ `, -V (1).  *bààkʔoo* 'stranger', *baakʔumcìì* 'a stranger's manner'.

*-niyaa* ` ´ ` `, -V (1), -zero (1).  *màraayàà* 'orphan', fem. *màraynìyaa*; *mùtum* 'person', fem. *mùtumnìyaa*.  Compare also *sàrawnìyaa* 'queen', *sàrawtàà* 'government' (see 2.3.2).

*-iyya* ` ´ ` and ´ `, -V (1).  *dawòò* 'lump of dough (fura)', pl. *dàwiyyà* and *dawìyya*.

*-ayya* ´ ` `, -V (1).  *dawòò* 'lump of dough', pl. *dawàyya*.

*-ooyii* ´ `, -V (1).  *kààmaa* 'a roast', pl. *kaamooyii*.

*-ayyii* ´ `, -V (2).  *zoobèè* 'ring', pl. *zoobayyii*; *tùùree* 'island formed by river', pl. *tuurayyii*.

*-aayee* ´ ` `, -V, -ay.  This is a common affix and always has this tone pattern

if loss is -V or -ay. With -uwaa loss an example with ‛ ' pattern was noted. sʔunsʔuu 'bird', pl. sʔunsʔààyee; bʔawree 'fig tree', pl. bʔawràayee; ʔuwaa 'mother', pl. ʔuwààyee; ʔamay 'vomiting', pl. ʔamààyee (-ay loss). With ‛ ' -uwaa (1): tùrbʔuwaa 'dry, dusty earth', pl. tùrbʔààyee.

-yaa ‛ ', -V (1). kàree 'dog', fem. kàryaa.

-inyaa ' ', -V (1). yaaròò 'boy', yaarinyàà 'girl'.

-waa ' ', -V (1). kuturuu 'leper', fem. kuturwaa. Although this is the only example noted, others (probably with varying tones) will undoubtedly be found in this dialect. The same may be said of -yaa (and others).

-uwaa ' ' ', -V. bààkʔoo 'stranger', fem. bààkʔuwaa; tùnkuu 'a wild feline', fem. tùnkuwaa. ' ' ', -V. kʔanèè 'younger brother', kʔanùwàà 'younger sister'. ' ', -V. sʔoofoo 'an old one', fem. sʔoofuwaa; gwamroo 'widower', gwamruwaa 'widow, formerly married but now husbandless woman'. ' ', -V (2). hannuu 'hand', pl. hannuwàà; kunnèè 'ear', pl. kunnuwàà.

-uway ‛ ', -iyaa (1). taasunnìyaa 'story', pl. tààsùnnùway.

-ina ' ', -V, -yaa (1). A not infrequent suffix, always with this tone pattern. dangì 'relative', pl. danginà; fùùlaa 'hat', pl. fuulinà; gamjìì 'gutta percha tree', gamjinà; kʔwaryaa 'a large calabash', pl. kʔoorinà (-yaa loss).

-una ' ', -V. A more frequent suffix than -ina, always with ' ' tone. kʔàfoo 'horn', pl. kʔafunà; tafkìì 'pond', pl. tafkunà; jìkkaa 'bag', pl. jikkunà.

-unna ' ', -V (3). A much rarer suffix but patterning like the last two: cikìì 'stomach, insides', pl. cikunnà; bàkaa 'bow (weapon)', pl. bakunnà; kwabòò 'English penny (copper)', pl. kwabunnà.

-annii ‛ ', -V, -ay; fairly frequent. kùbee 'sheathe', kùbànnii; maataa 'woman', pl. mààtànnii; kùùfuu 'lungs', pl. kùùfànnii; kʔòòsay 'bean cake fried in peanut oil', pl. kʔòòsànnii.

-annee ‛ ', -V (2). tùùsʔuu 'a kind of drum', pl. tùùsʔànnee; kààkaa 'grandparent', pl. kààkànnee.

-annuu ‛ ', -V (2). kùgee 'a metal percussion instrument', pl. kùgànnuu; jìdaa 'cloud', pl. jìdànnuu.

-unnii ‛ ', -uwaa (1). kààsuwaa 'market', pl. kààsùnnii.

-aanuu ' ‛ ', -V (1). ʔidòò 'eye', pl. ʔidàànuu.

-aanii ‛ ' ', -V (1). sʔakà 'middle', sʔàkaanii 'one in between'.

-akii ‛ ', -V (2). kwaanaa 'day', pl. kwàànàkii; goonaa 'farm', pl. gòònàkii.

-uka ' ', -V (4). rààfii 'stream', pl. raafukà; dàɽnii 'cane fence', pl. daɽnukà; kwaanòò 'galvanized iron', pl. kwaanukà; tawraa 'a fruit tree', pl. tawrukà.

-nuka ‛ ', -V (1). kàree 'dog', pl. kaɽnukà.

-akay ‛ ', -V (2). goonaa 'farm', pl. gòònàkay; galla 'a species of fly', pl. gàllàkay'.

-aatuu ‛ ', -V (1). leebʔèè 'cock's wattles', pl. lèèbʔààtuu. ' ' ', -V (1). cʔibìì 'a pile', pl. cʔibààtuu.

-taa ‛ '-zero (1), -V. kyaù 'beauty', kyàwtaa 'a present'; gàjeeree 'a short one', gàjàɽtaa 'shortness'; ʔamìnìì 'pal', ʔamìntaa 'trust'; baawàà 'slave', bàwtaa 'slavery' (BD). ' ' ', -V (1), -zero (2). kʔàzaamii 'a nasty one', kʔàzamtàà (-tà?) 'nastiness'; sàttin 'sixty', sàttintàà 'the sixtieth' (i.e. the sixtieth chapter of the Koran); sarkii 'king', sàrawtàà 'governing' (zero loss as sarkii is replaced by

*saraw-*, see 2.3.2; compare *sàrawnìyaa* 'queen'). ' `, -V (1).   *kuturuu* 'leper', *kutu ̣rtàà* 'leprosy'.

*-ntaa* ` ', -zero.   *yààyii* 'a passing fashion, fad', *yààyìntaa* 'transcience'; *saa- ̉àà* 'luck', *sàà ̉àntaa* 'luck'.

*-cii* ` ` ', -zero (1).   *mùtum* 'person', *mùtuncìi* 'respect'.   ` ` ` ', – one vowel mora (-zero?).   * ̉àlbarkàà* 'blessing', * ̉àlbarkàcii* 'blessing'.

*-nyaa* ` `, -zero.   *bàràà* 'servant', *baranyàà* 'maidservant'; *muugùù* 'an evil one', fem. *mugunyàà*; *jìikàà* 'grandchild', fem. *jìikanyàà*.

*-aw* ` ', -V (1).   *màganà* 'talk', *màgánaw* 'a talker'.

*-aCCee* ` ` ', -V.   This suffix indicates a person partaking of the nature described by the base.   It always has this tone pattern.   (See 3.2.3 for the same suffix with verb base.)   *b ̉ànnaa* 'ruining', *b ̉ànnannee* 'a ruined person'; *hàd ̉amàà* 'greed', *hàd ̉àmammee* 'greedy person'; *dànganàà* 'resignation to God', *dàngà- nannee* 'one resigned to God'.   For feminine *-aa* and plural *-uu* see 3.4.4.   One example of *-aa* was found with no corresponding *-ee*.   As this could be considered a feminine, no separate *-aCCaa* was set up: *saafiyà* 'morning', *sààfìyayyaa* 'morning'.

*-ii* ` ', -zero (4).   *làadan* 'muezzin', pl. *làadànii*; *tàwsay* 'pity' (BD), pl. *tàwsàyii*; *ràyray* 'sand', pl. *ràyràyii*; * ̉àlkù ̣r ̉an* 'Koran', pl. * ̉àlkù ̣r ̉àànii*.   ` ', -V.   *cìyaawà* 'hay', pl. *cìyààyii*; *màkaafòò* 'blind person', pl. *màkààfii*; *kwàd ̉oo* 'frog', pl. *kwàd ̉ii*.   ` ', -uwaa (?, 1).   *tàmraarùwàà* 'star', pl. *tàmràarii* (the masculine form *tàmraaroo* was not recorded).   ' ', -V (1).   *baawàà* 'slave', pl. *baayii*.

*-ee* ` ', -zero (2).   *wàlìi* 'prophet', pl. *wàlìyee*; *lìiman* 'Imam' (BD), pl. *lìi- mààmee* (see 2.2.7).

*-uu* ` ', -V.   * ̉àsaarà* 'loss', pl. * ̉àsààruu*; * ̉àwazzà* 'rib', pl. * ̉àwàzzuu*; *c ̉ingaaròò* 'potsherd', pl. *c ̉ingààruu*.   ` ', -iyaa (3).   *ka ̣rtaajìyaa* 'the integument of a corn- stalk' (BD), pl. *kà ̣rtààzuu*; *makallacìyaa* 'a thin strip of the integument of a corn-stalk' (BD), pl. *màkàllàtuu*; *zanga ̣rnìyaa* 'ear of grain', pl. *zàngà ̣rnuu*. ' ', -V (4).   *yaas ̉àà* 'finger', pl. *yaas ̉uu*; *maayèè* 'wizard', pl. *maayuu*; *d ̉anyee* 'a fresh one', pl. *d ̉anyuu*; *gaašìì* 'hair', pl. *gaasuu*; *kaỳ* 'head', pl. *kaanuu* also belongs here, but no regular loss (except -zero) can be stated, since a morpheme alternant is used.

*-aa* ` ` ', -V (1).   *dààmišìì* 'leopard', fem. *dààmisàà*.   ` ` ', -V.   *k ̉à ̣ramii* 'a small one', fem. *k ̉à ̣ramaa*; *màrak ̉ii* 'bull calf', *màrak ̉aa* 'female calf'; *dùkušii* 'colt', fem. *dùkusaa*.   ` ` ` ', -V.   * ̉àlfadarii* 'hinny', fem. * ̉àlfadaraa*.   ' ` ', -V. *kaafà ̣rìì* 'pagan', fem. *kaafà ̣ràà*. *làntirkì* 'electric light', pl. *lantìrkàà*.   ' `, -V (2). *zùngù ̣ruu* 'a long calabash', pl. *zungu ̣ràà*; *tààkàlmii* 'sandal', pl. *taakalmàà*. ' `, -V (1).   *hak ̉oorii* 'tooth', pl. *hak ̉ òòraa*.   ' ', -V (2).   *bak ̉ii* 'a black one', fem. *bak ̉aa*; *màataa* 'woman', pl. *maataa*.

*-ay*—very common; usually with ` ' tone pattern.   ` ', -zero (2).   *šà ̣rif* 'one who claims descent from Mohammed' (BD), pl. *šà ̣rìifay*; *tàrbuš* 'a fez', pl. *tàrbùsay*.   ` ', -V. *kyànkyàsoo* 'roach', pl. *kyànkyàsay*; *budurwaa* 'young wo- man', pl. *bùdùrway*; * ̉abààwaa* 'yarn', pl. * ̉abààway*.   ` ', -iyaa (3).   *tufaanìyaa* 'door', pl. *tùfàànay*; * ̉à ̣ràfiyàà* 'fine thread', pl. * ̉à ̣ràhay*; * ̉àkòòtiyaa* 'revolver', pl. * ̉àkòòtay*.   ` ', -waa (1), -uwaa (2).   *càkwaykwaywàà* 'a starling' (BD), *càkwàyk- wàyay*; *ku ̣rkunnuwàà* 'soot', pl. *kù ̣rkùnnay*; *tù ̣rgunnuwaa* 'an edible herb', pl.

*tùrgùnnay*. ' ', -V (1). *masookii* 'pin', pl. *masòòkay*. ' ', -V (1) *kuusùù* 'rat', pl. *kuusay*.

   *-iyaa* ' ' ' ', -V. *jààriirìì* 'baby', fem. *jààriirìyaa*. ' ' ', -V. *ʔàbookii* 'friend', fem. *ʔàbookiyàà* (also *ʔàbiyàà*). ' ', -V. *maykìì* 'Ruppell's griffon' (BD sub *miki*), fem *maykìyaa*; *maayèè* 'wizard', fem. *maayìyaa*.

   *-aawaa* ' ', -V, *-ay* (1). *fòòtoo* 'picture', pl. *fòòtààwaa*; *gwaarii* (tribe name), *gwààrààwaa* 'Gwaari tribesmen' (sg. *bàgwaarii*); *hawsa* 'Hausa', *hàwsààwaa* 'Hausas'; *tuuray* 'Europe', *tùùrààwaa* 'Europeans' (sg. *bàtuurèè*). ' ', -V. *bawcii* (place name), *bawtaawaa* 'people of Bauchi'; *tallàkàà* 'subject, tax-payer', pl. *tallakaawaa*; *kazganyàà* 'female lamb', pl. *kazganyaawaa*. As seen by these examples, *-aawaa* is added to many bases which may have the stem extension *bà-* with *-ii*, *-ee* suffixes. The latter forms are singular, the corresponding plural being formed from the simple base by the suffix *-aawaa*. (See 3.6.2 for *bà - - ii/ -ee*.)

   3.5.2. Deverbal nouns. Of the deverbal nouns, those formed with ' ' -zero never have any affixes. Any other apparently could, though few have been noted apart from the regular formations ' ' *ma - - V*, ' ' ' *ma - - ii*, and *-aCCee*. Several certain examples may be given: *moosʔ-* 'make a noise moving about', *mòòcʔii* 'noise of moving about' pl. *mòòsʔaa*; *sʔòòsʔ-* 'to suck, kiss', *sʔòòsʔoo* 'a kiss' pl. *sʔòòsʔànnii*; *taf-* 'to depart', *tàfiyàà* 'going', *tàfìyaw* 'one who goes'; *gaj-* 'to be tired', *gàjìyàà* 'the being tired', *gàjìyayyee* 'one completely tired out'; *raam-* 'to suffer loss to one's body, become thin', *raamìì* 'hole', pl. *raamunà*. With extended stem: *taaf-* 'to perform action with flat of hand or foot', *tààfii* 'palm, sole', pl. *tààfàffii*.

   Of the regular formations ' ' *ma - - V* may have several affixes. Those noted are: *-ee šaar-* 'to sweep', *mašaarii* 'sweeping instrument', pl. *mašààree*. *-aa dabʔ-* 'to pound', *madabʔii* 'beating stick', pl. *màdubbʔàà* (with extended stem; see 3.6.5.). *-ay buudʔ-* 'to open', *mabuudʔii* 'key', pl. *màbùùdʔay*. The plural in *-ay* is the most common.

   ' ' (') ' *ma - - ii* may have *-iyaa*, *-aa*, *-ay* (rare). With *-aa* the tone pattern remains the same; with *-iyaa* it is ' ' ' ' (variant ' ' ' '); *-ay* has ' '. E.g. *ʔaykat-* 'to work' (tr.), *maʔàykàcii* 'worker', fem. *maʔaykacìyàà*, pl. *maʔàykàtaa*; *kadʔ-* 'to beat', *makàdʔii* 'beater', fem. *makadʔìyàà*; *sassakʔ-* 'to chip', *masàssàkʔii* 'carpenter', pl. *màsàssàkʔay*.

   The *-aCCee* formation has ' ' ' *-aa* for feminine and ' ' *-uu* for plural (as when added to noun base, 3.5.1). E.g. *tuubʔ-* 'to remove, depose', *tùùbʔabbʔee* 'one removed or deposed', fem. *tùùbʔabbʔaa*, pl. *tùùbʔàbbʔuu*.

   3.5.3. Extended noun bases—possible affixes. The completely reduplicated base with change of tone may take ' ' *-ay*: *ʔàyààʔayàà* 'a plant like tiger-nut', pl. *ʔàyàààyay*; *kʔìbààkʔibàà* 'fat person', pl. *kʔìbààkʔìbay*. The example of reduplication after loss of final vowel and tone pattern takes *-kuu* with replacement vowel *-aaC¹-* (see 3.6.4): *kʔàykʔay* 'chaff', pl. *kʔàykʔàykuu* (note that here *-a-* replaces *-a-*).

   The *bà-* extension of the base may take *-ay*. Two examples have been noted, one with extended stem (affix -C-, 3.6.5). The tone pattern is ' '; loss is -V:

*hagòò* 'left hand', *bàhagòò* 'left handed person' pl. *bàhàgay*; *jinii* 'blood', *bàjinii* 'bull' pl. *bàjìnnay*.

Prefix reduplicated bases may have ` ´ *-uu*, ` ` *-ay*: *muunìì* 'ugliness', *mùmmuunaa* 'ugly person' pl. *mùmmùùnay*; *tawrii* 'toughness', *tàttawraa* 'tough person' pl. *tàttàwruu*; *gaašî* 'hair', *gàlgaasàà* 'hairy person' pl. *gàlgààsay*; *màataa* 'woman', *màlmaatàà* 'eunuch' pl. *màlmààtay*. Prefix forms with hypothetical bases do not take further affixes; all other forms from such a base are formed directly upon it.

The one example of the suffix formation has three affixes: *ʔàljanjànii* 'one possessed of Jinn', fem. *ʔàljanjànaa*, pls. *ʔàljànjànuu*, *ʔàljànjànay*.

3.6. **Extended stems.** Certain stems, after loss but before the addition of any affix to the stem, add to the base any one (and in a few cases two; see below) of a number of elements. Each resulting form has its possible affixes, but the total number of these affixes is very limited. They are:

*-ii  -ee  -uu  -aa  -ay  -aw  -uwaa  -aawaa  -kuu  -uka*

For possible affixes to bases thus formed see 3.4.4 and below.

3.6.1. **Reduplication with replacement** *-aa-*. This form reduplicates hypothetical sub-bases, replacing the last vowel of the reduplicated element by *-aa-*. It is always accompanied by ` ` *-ay*. Loss is -V. E.g. *\*fikee fiffikèè* 'wing' pl. *fîkààfîkay*; *\*šikee šiššikèè* 'beam' pl. *šîkààšîkay*; *\*gijee gilgijèè* 'cloud' pl. *gìzààgìzay*; *\*piloo pìlpilòò* 'butterfly' pl. *pìlààpìlay*; *\*kwiy kwiikwiyòò* 'puppy' pl. *kwìyààkwìyay*.

3.6.2. **Prefix formations, *bà-*, *ma-*.** The prefix *bà-* extends stems which may then have either *-ii* or *-ee* as suffix. The tone patterns vary. This formation may have the suffix *-iyaa* (3.4.4). The combinations of final vowel and tone pattern noted are:

*-ii* ` ´, -V. *dàwraa* (place name), *bàdàwrii* 'native of *Dawra*'; *zànfàraa* (place name), *bàzànfàrii* 'native of Zanfara'.

*-ee* ` ´ ´, -V. *bawcii* (place name), *bàbawcèè* 'native of Bauchi'. *tuuray* 'Europe', *bàtuurèè* 'a European, any white man'. ` ´´ `, -V. *gabàs* 'East', *bàgabašèè* 'Easterner'; *sakwatòò* (place name), *bàsakwacèè* 'native of Sokoto'. One example with stem extension *-t-* (3.6.5) was recorded: *ʔarèèwaa* 'North' *bàʔarèèwacèè* 'Northerner'.

Stems extended by *ma-* take ` ` (`) *'-ii*. The meaning is the same as when applied to verb bases, i.e. it indicates 'one who is constantly employed at' (the base form). E.g. *waakʔàà* 'singing', *mawààkʔii* 'singer'; *fàrawtàà* 'a hunt', *mafàràwcii* 'hunter'. For this affix with stem extended in *-t-*, *-nt-* see 3.6.5.

3.6.3. **Prefix CVC-.** One example of the prefix CVC- (cf. 3.3.2) used as stem extension was noted. It takes ` ` ` *-aayee*, -V loss: *jaa* 'red one' pl. *jajjààyee*.

3.6.4. **Infix formations.**

One infix reduplication, -C²C²V-, was noted. It reduplicates the second consonant of the stem, doubled, with the vowel following it. It has ` ` *-ay*: *kazagii* 'a type of drum', pl. *kàzàzzàgay*.

**Replacement vowels.** A fairly common stem formation is the replacement by a vowel (*-aa* or *-u-*) of the sequential element (-zero- [close juncture] or -V-)

between the last two consonants of a base after loss.   With *-u-* the stem may also be extended by -C-, so that three patterns are possible: *-uC¹-*, *-uC¹C¹-*, *-aaC¹-*.   Possible affixes:

　　*-uC¹- -aa*　　　　　　　　　　*-uC¹C¹- -aa*
　　*-aaC¹- -ii -ee -uu -ay -kuu*

E.g. *-uC¹-* ' ', -V (3).   *gàatarii* 'axe' pl. *gaaturàà*; *tambàrii* 'a type of drum' pl. *tamburàà*; *màsassabii* 'a harvesting implement' (BD sub *magirbi*) pl. *masussubàà*.

　　*-uC¹C¹-* ' ', -V.   *hankàlii* 'sense, caution' pl. *hankullàà*; *rawànii* 'turban' pl. *rawunnàà*; *takòòbii* 'sword' pl. *takubbàà*.

　　*-aaC¹- -ii* ' ' ', -V (1).   *gùrmii* 'an instrument like a banjo' pl. *guràamii*. ' ', -V (1), *-iyaa* (2).   *dookìì* 'horse' pl. *daawaakii*; *tunkìyaa* 'ewe' pl. *tuumaakii*; *ʔàkwiyàà* 'female goat' pl. *ʔaawaakii*.   *-ee* ' ' ', -V, *-yaa* (3), *-waa* (3).   This is the most common of the infix formations and always has ' ' ' tone pattern: *gišìrii* 'salt' pl. *gišàaree*; *kuturuu* 'leper' pl. *kutàaree*.   *ʔamaryaa* 'bride' pl. *ʔamàaree*; *tukunyàà* 'calabash pot' pl. *tukàanee*; *tabʔaryaa* 'pestle' pl. *tabʔàaree*. *dakʔwalwaa* 'a laying hen' (BD) pl. *dakʔwàalee*; *kurmwaa* 'deaf man' pl. *kuràamee*. *-uu* ' ' ', -V.   *duucʔìì* 'rock' pl. *duwààsʔuu*; *dʔuuyèè* 'buttock' pl. *dʔuuwààwuu*; *murfùù* 'cooking place, oven' pl. *murààfuu*.   *-ay* ' ' ', -V (1).   *gišìrii* 'salt' pl. *gišààray*.   *-kuu* ' ', -V (3 plus example in 3.5.3).   *raariyaa* 'strainer, path' pl. *rààràykuu*; *sʔaamiyaa* 'the tamarind tree' (BD) pl. *sʔààmàykuu*; *gaskeeyaa* 'truth' pl. *gàskàykuu*.

　3.6.5.　Suffix formations.

　*-t-*.   One stem extended in *-t-* is found with the suffix *-aw*: *jaa* 'red one', *jààtaw* 'a reddish person or thing'.   Its (-*t*-'s) most frequent use is with *-ii* on a stem extended in *ma-* (3.6.2).   The loss to the base is zero or one vowel mora (i.e. the final vowel of the base is shortened, if long, before the addition of *-t-*.   E.g. *hàwkaa* 'madness' *mahàwkacii* 'crazy person'; *yunwàà* 'hunger' *mayùnwàcii* 'hungry person'; *kʔaryaa* 'lie' *makʔàryàcii* 'liar'.   One example was noted with stem extension *bà-* and affix *-ee*: *ʔarèèwaa* 'North' *bàʔarèèwacèè* 'Northerner'.

　Stem extension *-nt-* is also found with *-ii* and prefix *ma-*: *saàtàà* 'stealing' (deverbal noun) *masààtàncii*.

　Stem extension -C- added to a base after loss doubles the final consonant of the base.   It occurs with simple bases, with stems having replacement vowel *-u-* (3.6.4), once with stem with prefix *bà-* (3.6.2).   It is found before *-ii*, *-ee*, *-uu*, *-aa*, *-ay*, *-uwaa*.   E.g. *-ii* ' ', -V (1) *zààboo* 'guinea chicken' pl. *zàbbii*.   *-ee* ' ', -V (1) *kʔanèè* 'younger brother' pl. *kʔannee*.   *-uu* ' ', -V (1) *sʔananii* 'oppression' pl. *sʔànànnuu*.   *-aa* ' ', -V (2) *kʔaatòò* 'big tough man' pl. *kʔattàà*; *ràakʔumii* 'camel' *raakʔummàà*.   *-ay* ' ', -V *ʔàmiinìì* 'pal' pl. *ʔàmìnnay*; *ʔìbìliišìì* 'demon' pl. *ʔìbìlìssay*; *ʔàniinìì* 'coin worth a tenth of an English penny' pl. *ʔànìnnay*. *-uwaa* ' ', -V (1) *zanì* 'a type of woman's garment' pl. *zannuwàà*.

　Reduplicative suffixes.   These consist of the addition of three moras (one mora = a single consonant or vowel) to the base, the last consonant mora being identical with the last consonant of the base (with regular phonologic changes). Two (-C²VC-, -VC²C-) are reduplications of the last three moras of the base. The others are:

　-VCC-　-aCC-　-uCC-

-VVC-   -aaC-   -ooC-   -eeC-   -uuC-
-VyV-   -ayC-

The possible suffixes and their occurrence with stems thus extended are:

| | | | | | |
|---|---|---|---|---|---|
| *-ii* | *-aCC-* | *-aaC-* | *-ooC-* | *-eeC-* | *-C²VC-* |
| *-ee* | *-aCC-* | *-aaC-* | | *-eeC-* | |
| *-uu* | *-aCC-* | *-aaC-* | | *-C²VC-* | *-V¹C²C-* |
| *-aa, -uka* | | | *-uCC-* | | |
| *-ay* | *-aCC-* | *-ayC-* | *-uuC-* | | *-V¹C²C-* |
| *-uwaa* | | *-aaC-* | *-uuC-* | | |

Examples, listed according to stem extension, are:

*-aCC-.   -ii* ` ', -V *gàagee* 'torch' pl. *gàagàggii*; *tòòɽoo* 'bull'; pl. *tòòɽàɽɽii*; *toofaa* 'a tough grass' pl. *tòòfàffii.   -ee* ` ', -V (1), ' ` ', -V (1) *kabàà* 'a little palm tree' pl. *kàbàbbee*; *giyàà* 'a kind of tree' pl. *giyàyyee.   -uu* ` ', -V *-iyaa* (1).   This is a fairly frequent formation.   Compare the plural of forms with the suffix *-aCCee* (3.4.4 and 3.5.2).   *zàree* 'thread pl. *zàràrruu*; *toozoo* 'hump' pl. *tòòzàzzuu*; *habˀàà* 'chin' pl. *hàbˀàbbˀuu*; *ceedˀiyaa* 'fig tree' pl. *cèèdˀàddˀuu.   -ay* ` ', -V (2) *madaɽaa* 'fresh milk' pl. *màdàɽàɽɽay*; *gabˀàà* 'member of the body' pl. *gàbˀàbbˀay.   ' ` ', -V (1) *sullee* 'top of a corn-stalk' pl. *sullàllay*.

*-aaC-.   -ii* ` ', -V (1) *sˀoofoo* 'an old one' pl. *sˀòòfàáfii.   -ee* ' ` ', -V.   A common plural formation always with ' ` ' tone.   *birùù* 'monkey' pl. *biràaree*; *dunyaa* 'goose' pl. *dunyààyee*; *gaawaa* 'dead body' pl. *gaawààyee.   -uu* ` ', -V (1), ' ', -V (1), ' ` ', -V (1) *bàaɽee* 'foreigner' pl. *bàaɽààɽuu*; *beeɽàà* 'a young girl' pl. *beeɽaaɽuu*; *miyà* 'soup' pl. *miyààyuu.   -uwaa* ' ', -V (3) *kˀayàà* 'thorn' pl. *kˀayaayuwàà*; *kˀafàà* 'foot' pl. *kˀafaafuwàà*; *kabàà* 'a little palm tree' pl. *kabaabuwàà.*

*-ayC-* only with *-ay* ' ` ', -V or *-iyaa*.   *kˀafàà* 'foot' pl. *kˀafàyfay*; *daadˀii* 'pleasure' pl. *daadˀàydˀay*; *tuujèè* 'a type of bustard' (see BD s.v.) pl. *tuuzàyzay*; *bušiyaa* 'hedgehog' pl. *busàysay.*

*-ooC-* only with *-ii* ' '.   This is a very common formation, always with this tone pattern.   Loss to the base may be -V, *-ay*, *-iyaa*, *-uwaa*, *-in*, *-ayaa*, or -zero.   -V *sˀabgàà* 'switch' pl. *sˀabgoogii*; *ˀàfoo* 'garlic' pl. *ˀafoofii.   -ay* (2—see below under the numerals) *sˀàwsˀay* 'disaster' pl. *sˀawsˀoocˀii.   -iyaa* *sˀarkìyàà* 'thong on a drum' pl. *sˀarkookii*; *muujìyàà* 'owl' pl. *muujoojii.   -uwaa* *ɽakuwaa* 'a type of insect' pl. *ɽakookii.*

The names of the numerals may have this formation, and they illustrate the other possible losses to the base.   They are given in full (from 'two'; the plural of 'one' was only gotten in the word for 'eleven'), though the word for 'five' has only the suffix *-ii.   biyuu* 'two' pl. *biyooyii.   ˀukù* 'three' pl. *ˀukookii*; *fudˀuu* 'four' pl. *fudˀoodˀii*; *bìyal* 'five' pl. *biyoolii*; *šiddà* 'six' pl. *šiddoodii*; *bakwày* 'seven' pl. *bakookii*; *takwàs* 'eight' pl. *takwasoošii*; *taɽà* 'nine' pl. *taɽoorii*; *goomà* 'ten' pl. *goomoomii*; *šaàdˀayaa* 'eleven' pl. *šaàdˀoodˀii*; *ˀàšìɽin* 'twenty' pl. *ˀašiɽoorii*; *tàlàatin* 'thirty' pl. *talaatinoonii*; *ˀàɽbàˀin* 'forty' pl. *ˀaɽbaˀinoonii*; *hàmsin* 'fifty' pl. *hamsoosii*; *sàttin* 'sixty' pl. *sattinoonii*; *sàbàˀin* 'seventy' pl. *sabaˀooˀii*; *tàmàànin* 'eighty' pl. *tamanoonii*; *gòòmiyattaɽà* pl. *gòòmiyattaɽoorii*; *dˀàrii* 'one hundred' pl. *dˀaroorii.*   This list illustrates very well the inconsistency of the loss suffered by similar bases.   'ninety' is a combination of noun-*na*-noun;

only the second noun, *taṛà*, is affected by the formation.    This is true of 'eleven' also, where *šaà* is an element forming the numbers from eleven to nineteen.

   *-uuC-*.   *-uwaa* ` ´ ´ `, *-V* (1), ` ´ ´ ´ `, *-waa* (1) *kwarì* 'ravine' pl. *kwàruuruwàà*; *turwaa* 'a type of ant' pl. *tùruuruwaa*.

   *-uCC-*.   *-aa* ´ `, *-V* (3).   *-uka* ´ `, *-V* (1).   *gàrii* 'country' pl. *garurràà* or *garurrukà*; *kˀàšii* 'bone' pl. *kˀasussàà*; *dàfoo* 'a cook' pl. *dafuffàà*.

   *-eeC-*.   *-ii* ´ ` `, *-V* (1) *ganyee* 'leaf' pl. *ganyèèyìi*.   *-ee* ´ ´ `, *-V* (3) *waakèè* 'beans' pl. *waakèèkee*; *fagèè* 'any cleared open space' (BD) *fagèègee*; *fùree* 'blossom' pl. *furèèree*.

   *-C²VC-*.   *-ii* ´ ´ ` `, *-yaa* (1) *magaryaa* 'Jujube tree' (BD) pl. *magàrgàrii*. *-uu* ´ `, *-V* (1) *màganà* 'talk, speech' pl. *màgàngànuu*.

   *-V¹C²C-*.   *-uu* ´ `, *-V* (1) *tàfšee* 'squash soup' pl. *tàfsàfšee*.   *-ay* ´ ` `, *-V* (1) *gyaftòò* 'skirt' pl. *gyaftàftay*.

## MORPHOLOGY OF THE VERB

4.1. Levels of formation.   The verb, like the noun, has two levels of formation, base (simple or extended) and stem.

4.1.1. Base.
  A. Simple verb bases
    1. Verb roots
    2. Verb bases from nouns by affixes (*-t-*, *-nt-*, *-at-*)
  B. Extended verb bases
    1. Reduplicative prefixes (3 moras)
    2. Suffixes.
      a. Reduplicative
      b. *-iy-*
      c. *-any-*
      d. *-s-*
      e. *-D-*

4.1.2. Stem.   The verb stem is formed by the addition of a tone set and suffix to the base.   The tone sets are:

    ´    ´ (`)    ` ´   ´ ´    ` ` ´   ´ ´ ´    ` ´ `  ´
    ´ 1  ´ _ `   ´ `   ` ´ `   ´ ` ´   ` ` ` ´   ´ ´ ´ `

The suffixes are: -zero, *-ee/-i*, *-ee*, *-i*, *-u*, *-oo*, *-aa*.

4.2. Verb bases.

4.2.1. Simple verb bases.   Of these verb roots form by far the largest number. Examples are: *yii-* 'to do, make', *cii-* 'to eat', *saa-* 'to put', *cee-* 'to say', *ʔayk-* 'to send', *kar-* 'to break', *laas-* 'to lick', *tambay-* 'to ask'.   The meanings given with bases are derived from their use in stems.   An attempt is made to give the underlying meaning if the stems have radically different senses.   When this is not possible, several meanings are given.

4.2.2. Denominative verbs.[1]   These are formed from noun bases by loss of tone pattern and ending and the addition of *-t-*, *-nt-*, or *-at-*.   The ending loss to the noun base may be -zero or *-V*.   For example:

*-t-* *gaafaràà* 'forgiveness', *gaafaɽt-* 'to forgive' *kàgààfàɽceenì* 'forgive me!'; *gyaaraa* 'remodelling, repairing' (deverbal noun), *gyaɽt-* 'to repair something broken' *yaagyaɽtààšì* 'he repaired it'.

*-nt-*, -zero loss to base: *ʔyaa* 'freeborn children', *ʔyant-* 'to free' *yaáʔyantààšì* 'he is going to free him'; *šeegèè* 'bastard', *šeegant-* 'to speak evilly of' *yaašeegàntaaši* 'he spoke evilly of him', *šèègàntaccee* 'one evilly spoken of'.

*-at-*, *-V* loss to base: *ʔaykìì* 'work', *ʔaykat-* 'to work' (trans.) *maʔàykàcìi* 'one who works something', *naaʔaykàtààšì* 'I worked it'.   *bʔànnaa* 'ruining' (especially of a farm), *bʔannat-* 'to ruin' *yaabʔannàceeši* 'he ruined it'.

One formation with the addition of *-n-* after loss of final vowel and tone pattern

---

[1] Compare PH 89, 90.   On verb formatives in general see also LHS 55, 56, GHL 101–116 (very poor), WHS xxi–xxiii.

was noted: *ʔawòò* 'purchasing for household needs', *ʔawn-* 'to measure, weigh' *kàʔawndà manì kʔwaryaa* 'measure me a kʔ. of cloth'.

4.2.3. Extended verb bases.

The reduplicative prefixes are identical with those used with the noun (see 3.3.2; no $CVC^2$- is there quoted, but it undoubtedly exists). These are $CVC$-, $CVC^2$-, $CVn$-, $CVl$-. With the verb, however, the $CVC$- prefix allows only a short vowel in the base following. One example each have been found of the other three with verb bases.

$CVC$- This usually gives a continuous intensive aspect to the base. Suffixes and tone sets noted are: ` ´ ` -ee, ´ ´ ` -ee, ´ ´ ´ -oo. E.g. *cʔaag-* 'to tear', *cʔaccʔag-* 'to tear tear continuously or violently' *kààzaa taacʔàccʔàgeenì* 'the chicken pecked me', *yaacʔaccʔàgeeší* 'he tore him to pieces'; *taar-* 'to come together', *tattar-* 'come together (continuously)' *kùtattaroo mùsùlmii* 'come meet together (for worship), Muslims!' For this prefix on a stem extended by *-iy-* see below.

$CVC^2$- ´ ´ ´ -ee. *kar-* 'to break', *karkar-* 'to scrape' *yaakarkàrèèšì* 'he scraped him'.

$CVn$- ´ ´ ´ -ee. *bʔaar-* 'to remove outer covering', *bʔambʔar-* 'to shell' *bʔàmbʔàreeší* 'shell it!'

$CVl$- ´ ` ´ -ee, -aa. *\*giz-* (see 3.3.2), *gilgiz-* 'to shake' *naagilgìjèèšì* 'I shook it', *naagilgìzaaši* 'I shook it (to knock something off)'.

One example of a reduplicative suffix *-VCC-* was noted. This repeats the last vowel and consonant (doubled) of the base. The example also has the *-iy-* suffix. *kar-* 'to break', *kararriy-* 'to break to pieces' *naàkàrarrìyeeši* 'I'll break him to pieces', *yaàkàrarrìyaaka* 'he'll break you to pieces'. The difference between the *-ee* and *-aa* forms is unclear.

*-iy-*. This is the only base formative which has been found with any other such formative on the same base. It occurs with both $CVC$- and *-VCC-* (see above), though not with both together. *kar-* 'to break', *kariy-* 'to break, cut (wages, price)' *yaakarìyàà mamù kudʔii* 'he cut our wages', *yaakarìyaaši guntuu guntuu* 'he broke him up into little bits'. With $CVC$-: *kakkariy-* 'to break up', *yaakakkàrìyààšì* 'he broke him up' (like a stick).

Suffixes *-any-*, *-s-*, and *-D-* have been noted in the following combinations: *-any-* ´ ` ´ -ee, -aa; *-s-* ´ ` -aa, ´ ` -ee; *-D-* ´ ` -aa. The base suffers loss of *-V* when *-any-* is added. Note that *-D-* is found only with *-aa*. This was apparently the morpheme *da* 'with', but it is here a verb formative and no longer functions as the preposition. The final vowel of the preposition is short, also, whereas the *-aa* following *-D-* is the same length as other verbs' *-aa* suffixes.

*-any-*. *šaa-* 'to drink', *šany-* 'to dry, drain' *naašanyaa namàà* 'I put meat out to dry', *yaašanyèèšì* 'he drank it up'; *cii-* 'to eat', *cany-* 'to eat up' *yaacanyaa ʔàbincii* 'he ate up all the food', *yaacanyàà kudʔinšì* 'he used up all his money'.

*-s-* *gay-* 'to tell', *gays-* 'to greet' *mùtàfi // mùgaysèešì* 'let's go and greet him', *mungaysààši* 'we greeted him'.

*-D-* *gay-* 'to tell', *gayD-* 'to greet' *mùtàfi // mùgaydàà ʔàlhajì* 'let's go and greet the Meccan pilgrim'; *baa-* 'to give', *baaD-* 'to give away' *yaabaadààši* 'he gave it away'.

4.3. Formation of the stem. The stem is formed by the addition of a tone

set and suffix to the base.   This tone set consists of one or more tone patterns, the use of each being determined by context (see 4.5).   The sets are indicated in the discussion by what may be considered the 'key' patterns, usually that after *yaa-* (*šii* + ' ', see 2.3.3).   The following combinations of tone sets and final vowels were noted:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ' | -zero | ' ` | -ee/-i, -aa, -u, -i | ` ' ' | -aa | ' ' ' ' | -ee |
| '1 | -zero, -ee, -oo | ' ` | -ee | -aa, -u, -i | ` ' ' | -ee/-i | ' ' ' ' | -ee, -aa |
| ' (`) | -zero | ' ' | -ee | -aa, -oo, -i | ' ' ' | -ee | -aa | ' ' ' ' | -ee |
| ' - ` | -zero | | | | ' ' ' | -oo | | |

### 4.3.1. Interrelations of stems.[2]

' ` -*ee* and ' ' ' -*ee* are usually intensive in contrast to ' ' -*ee/-i* and ` ' ' -*ee/-i*. E.g. *ʔ(e)b-* 'to take some from', *yaaʔèèbeešì* 'he fetched a little of it', *yaaʔeebèèšì* 'he fetched a lot of it'.   *bug-* 'to beat', *yaabùgeešì* 'he beat him', *yaabugèèši* 'he beat him badly'.   *ʔams-* 'to receive', *naaʔàmšeešì* 'I received it', *naaʔamšèèši* 'I received it back' (it being my own).

Differences between ' ` -*ee* and ' ` -*aa* are hard to determine, but one clear case is *nikʔ-* 'to grind', *naanikʔàà daawàà* 'I ground guinea-corn', *kànikʔèèšì dà lafkii* 'grind him to powder!'   Here ' ` -*aa* is used of grinding grain, while ' ` -*ee* has an extended meaning, that of 'grinding' people.

-*oo* usually indicates 'hither' in contrast to -*aa*, -*ee*, etc.   E.g. *ʔayk-* 'to send', *yaaʔàykeešì* 'he sent him', *yaaʔaykààšì* 'he sent him thither', *yaaʔaykooši* 'he sent him here'.   *taf-* 'to depart', *yaatàfi* 'he went', *yaatafoo* 'he departed to come here, he came'.   *koom-* 'to return', *yaakoomàà // gidaa* 'he returned home (there)', *say kaàkoomoo* 'till you return (here)'.

4.3.2. Object of verb's action.   Four usages of the verb stem may be distinguished in regard to the object of the action:

1. Object expressed (noun or pronoun)
2. Object implied
3. Subject of the verb the object of the action
4. Intransitive.

It is sometimes difficult to tell whether the object is implied or the subject is the object of the action.   The following are interrelations of tone sets with regard to these types:

' ` -*u* ' ` -*u* may express usages 2–4, but no case of these with object expressed was noted.   E.g. *saam-* 'to get possession of', *yaasaamù* 'he received'.   An object is always implied.   *mut-* 'to die', *yaamutù* 'he died'.   *bug-* 'to beat', *yaabùgu* 'he became drunk' (i.e. was beaten).   *gam-* 'to put together', *yaagàmu dà kuuraa* 'he met a hyaena' (i.e. was put together with).

With -*ee/-i* the object is practically always expressed, the final vowel being -*ee* before pronouns and -*i* before nouns.   Two examples have been noted of their use with object implied: *dʔawk-* 'to take', *dʔàwki tàfi* 'take (him) and go!'; *zaabʔ-* 'to choose', *kàtàfi // kàzààbʔee* 'go and choose!'   Usually, however, the object implied usage is expressed by ' ` -*aa* or ' ' -*aa*, the meaning paralleling that of the same base with ' ` -*ee/-i*.   E.g. *dʔawk-* 'to take', *kàdʔawkàà // tàfi* 'take (him)

[2] Compare MGSH 27–29, LHS pp. 52–54.   There is also a good deal in PH, e.g. 105, 112, 113ff.

and go!', *kàd²àwkeešì* 'take him!'; *²ams-* 'to receive', *yaa²amsàà* 'he received (it)', *yaa²àmšeešì* 'he received it', *naa²àmšì wannàn* 'I received this'; *²(e)b-* 'to take some from', *yaa²ìïbàà* 'he fetched a little', *yaa²èèbeešì* 'he fetched a little of it'.   However, in other verbs both ' ' *-aa* and ' ' *-aa* may have object expressed or implied.   The same relation exists between ' ' ' *-ee/-i* and ' ' ' *-aa*.

' ' *-i* and ' ' *-ee* are both used to indicate action upon the subject.   (' ' *-ee* is also found with object expressed.)   E.g. *b²add-* 'to lose', *yaab²accèè* 'he's lost'; *b²aat-* 'to spoil', *yaab²aacì* 'he's spoiled'.

4.4. Affixes to the stem.

4.4.1. Prefixes.   The pronominal prefixes have been treated in 2.3.3 and may be summarized (numbers refer to pronoun chart in 2.3.3):

Perfective—*naa-* (2) with ' '

Negative perfective—*bà—ba* plus *ǹ-* (11)

Future—*naa-* (2) with ' '

Optative—*²ìn-* (10)

Negative optative—*kadà-* plus *²ìn-*

The negative of the future is rare, another construction (*baà-* plus pronoun before a verbal noun, deverbal noun, or verb phrase used as a noun) usually being used.   One example was, however, noted: *bàkaàlààšì hancìnkà bà* 'you'll never lick your nose'.   The optative is used independently to express a wish, though the second person is no more than a substitute for the imperative.   It is also used after other verbs, such as 'wish', 'cause', etc.

The imperative morpheme (!) may be considered a prefix, also (actuallized as zero but affecting the tone pattern [see below]).

The stem is rarely found without one of the above prefixes.   Several examples with noun subject where the stem is without prefix have been noted.   E.g. *²allà baamù duuniyàà // mùyi hàwkaa // ²allà baamù duukìyaa // mùkašèèta* 'God has given us the world; let's act crazily.   God has given us property; let's waste (lit. kill) it!' (song).

4.4.2. Elements (not all affixes) following verb stem.   The elements which follow the verb stem and affect it as to tone and final vowel are: pronoun object (2.3.3, chart 5, 8), *-waa*, and noun object.   In the following lists *-ši* will represent the pronoun objects.   *-waa* occurs only with stems which may not act as nouns (see 3.2.2).   It is found with verb stems without prefixes, i.e. the prefixes and *-waa* are mutually exclusive.   A stem followed by *-waa* occurs in noun position syntactically (e.g. after *šinà*).   Compare the indefinite pronominal element *wa-* (2.3.5).

4.5. Tone sets.   The following are the tone sets noted with the individual patterns belonging to each and the possible suffixes to the base.   The forms after *šinà* function syntactically as nouns but are verbal in form.

4.5.1. ' -zero.

' optionally after *bàn-*, *yaà-*, *kà-*[3] (i.e. a preceding low tone) before noun object, or without object.

' elsewhere.

[3] Single prefixes and suffixes here stand for whole paradigms (see 2.3.3).

Verbs with this pattern are *bii-* 'to follow', *cii-* 'to eat', *fii-* 'to surpass', *jii-* 'to perceive', *yii-* 'to do, make', *soo-* 'to want'. Before noun object *-ii* is replaced by *-i*. E.g. *bii-* 'to follow': ' *kàbì hanyàjjìrgii* 'follow the railroad!'; ' *kàbi mùtum wannàn* 'follow that man!', *kàbiiš̀i* 'follow him!', *d²ayaa taabi d²ayaa* 'one followed another'. *cii-* 'to eat': ' *gòòbee naàcì ²àbincii* 'tomorrow I'll eat food', *nii bàncì ²àbincii ba* 'I didn't eat food'; ' *naàcii* 'I'll eat', *kadàkàciiš̀i* 'don't eat him!', *nii bànci ba* 'I didn't eat', *munci kààmaa* 'we ate roast meat', *²inà soò ²ìnci ²antakkààjii* 'I want to eat chicken liver'. *jii* 'to perceive: ' *nii bànjì dukà bà* 'I didn't understand everything', *naayii makà // kàjì kunyà* 'I made you feel ashamed', *bàyjì hawsaa ba* 'he didn't understand Hausa'; ' *kuuraa taaji kàree* 'the hyaena heard the dog', *kay // bàkàji tàwsàyii ba* 'you feel no pity', *nii bànji dà kyaù bà* 'I didn't understand well', *kadàkàjiiš̀i* 'don't listen to him!'. *yii-* 'to do, make': ' *koo²inaa // kaajee kaàyì gidaa* 'wherever you go, you'll make a home', *suǹyì dòòka* 'they're going to make an order'; ' *sunyi dòòkaa* 'they made an order', *²allà // yaayiinì* 'God made me', *naàyii* 'I'll do (it)', *kàyi màganà* 'speak!', (lit. 'make speech!'). *soo-* 'to want': ' *²allà // yaàsookà* 'God will love you', *²allà // yaàsoo mùtum wannàn* 'God will love this man'.

4.5.2. '1 -zero, -*ee*, -*oo*.

' in imperative before -*š̌i*, sometimes before noun object

' elsewhere

Verbs taking this tone set are *bar-* 'to leave', *gaa-/gan-* 'to see', *jaa-* 'to pull', *kaaY-* 'to bring', *šaa-* 'to drink', *z-* 'to be on one's way'. E.g. *bar-* 'to leave', -zero: ' *bàr̦ni* 'leave me!', ' *yaabar̦š̌i* 'he left him', *yaàbar̦nì* 'he'll leave me', *kadàkàbar̦š̌i* 'don't leave it!', *yaabar̦ gidaa* 'he left home'. *gaa/gan-* 'to see', -zero: ' *gààš̌i* 'look, there he is!' (lit. 'see him!'), *gàà b²aawammacìrjii* 'look, there's a snakeskin!'; ' *yaagaa kuuraa* 'he saw the hyaena', *yaagaǹš̌i* 'he saw him', *naàgansù* 'I'll see them', *bàtàgaǹš̌i bà* 'she didn't see him'. *kaaY-* 'to bring', -zero: ' *taakay raamìntà* 'she brought (it) to her lair'. *jaa-* 'to pull', -zero: ' *yaajaanì fad²àà* 'he pulled me into fighting', *yaajaa ²ìgiyàà* 'he pulled the rope'. *šaa-* 'to drink', -zero: ' *šaa noonòò* 'drink milk!', *yaašaaš̌i* 'he drank it', *yaašaa bààr̦ààsaa* 'he drank liquor', *bààni ruwaa ²ìnšaa* 'give me water to drink!'. *z-* 'to be on one's way', -*ee* 'to go', -*oo* 'to come': ' *yaajee* 'he went', *yaazoo* 'he came', *šii yaàzoo // nii naàzoo* 'he's coming and I'm coming', *zoo naǹ* 'come here!', *zoo dà mààrèècee* 'come in the evening!'.

4.5.3. ' (') -zero.

' in imperative before -*š̌i*, noun object.

' before pronoun elsewhere

' ' in all other positions

The only verb noted with this tone set is *baa-* 'to give': ' *bààni ruwaa ²ìnšaa* 'give me water to drink', *bàà màataa wannàn fur̦àà* 'give this woman fura!'; ' *naabaakà ²ita* 'I have given her to you', *naàbaakà ²àbù wannàn* 'I'll give you this', *²allà yàbaakà gaafar̦àà* 'may God give you pardon'; ' ' *yaabaà mààtaš̌š̌i dafìì* 'he gave his wife poison', *naabaà sarkii* 'I gave to the king'.

4.5.4. ' - ' -zero, -*oo*.

' - ' in all forms recorded.

Verbs having this pattern are *cee-* 'to say', *saa-* 'to put', *z-* 'to be on one's way'. E.g. *cee-* 'to say', -zero: *kaaji Ɪȧbin//dȧ yaaceȩ?* 'did you understand what he said?', *naaceȩ masȕ* 'I said to them', *kuuraa taaceȩ wannȧn* 'the hyaena said this', *nii bȧnceȩ koomii ba* 'I didn't say anything', *miȋneenȩȩ // zaȧnȋ ceȩ* 'what shall I say?', *ꞯȧbin//dȧ kanȧ ceȩwaa* 'the thing you're talking about'. *saa-* 'to put, place' -zero: *saȧ rȋȋgaa* 'put on some clothes', *saȧšȋ gȧ wutaa* 'put it in the fire!' (*kȧsaȧ* more common), *ꞯallȧ kȧsaȧ // ꞯȋngaa ꞯȧnnabȋ* 'God grant (lit. place) that I see the prophet!', *kadȧkȧsaȧ lȋttaafȋȋ naȟ* 'don't put the book here!', *nii baȧni saȡwaa naȟ* 'I won't put (it) here', *naasaȧ naȟ* 'I put (it) here', *naasaȧšȋ naȟ* 'I put it here', *sunsaȧ mȧsaȧ kaayaa* 'they put a load on the ox (*saȧ*)'. *z-* 'to be on one's way', *-oo* 'to come (hither)': *zoȯ naȟ* 'come here!', *kȧzoȯ naȟ* 'come here!', *kadȧšȋzoȯ naȟ* 'may he not come here!', *muȟzoȯ naȟ* 'we'll come here', *šinȧ zoȯwaa* 'he's coming'.

4.5.5. `` ' *-ee/-i*.

`` ' in imperative before noun object, optionally elsewhere with noun object.
` ' elsewhere.

This is a very common form. *-ee* occurs before pronoun object (*-ši*) and *-i* before noun object (but see also 4.3.2). E.g. *saam-* 'to get possession of', *-ee/-i* 'to get, receive': `` ' *naasȧȧmȋ daamaa* 'I got an opportunity', *kaȧsȧȧmȋ duuniyȧȧ* 'you will get the world', *šinȧ sooȟyȧsȧȧmȋ kꞮwaarii gȧ ꞯȋbȋliišȋȋ* 'he wanted to receive magical power from the demon', *nii bȧnsȧȧmȋ daamaa ba* 'I didn't get a chance'; ` ' *kaȧsȧȧmi kȕlakkȧ // yaȭ* 'you'll get your care today', *wani ꞯȧbu yaasȧȧmeešȋ* 'something happened to (lit. got) him'. *duub-* 'to look', *-ee/-i* 'to look at': `` ' *dȕȕbȋ baayankȧ* 'look behind you!', *naadȕȕbȋ gusȕn* 'I looked South'; ` ' *yaadȕȕbeenȋ* 'he looked at me', *kȧdȕȕbeešȋ* 'look at him!', *rȧȧkꞮumii // mȧyduubanneesȧ bȧkȧdȕȕbi kusaa ba* 'O farseeing camel, you don't look at (anything) nearby'. *bug-* 'to beat', *-ee/-i* 'to beat a little': `` ' *bȕgȋ ꞯabdȕ gȧ bȧȧki* 'hit Abdu on the mouth!', *yaabȕgȋ mȧȧtaššȋ* 'he beat his wife' (optionally:) ` ' *yaabȕgi mȧȧtaššȋ, yaabȕgeešȋ* 'he beat him', *yaȧbȕgeešȋ* 'he'll beat him'. *hayf-* 'to bear (a child)': `` ' *taahȧyfȋ yaarȯȯ* 'she bore a boy'; ` ' *taahȧyfi namijȋ* 'she bore a male (child)', *taahȧyfeešȋ* 'she bore him'.

4.5.6. `` ' *-aa*

`` ' before noun object
` ' elsewhere

E.g. *jikꞮ-* 'to wet', *-aa* 'to be wet' (` ` *-aa* 'to wet'): ` ' *taajȋkꞮaa* 'it's wet'. *saY-* 'to buy', *-aa* 'to buy (it)' (` ` *-ee* 'to buy', trans.): ` ' *naasȧyaa* 'I bought (something)'. *šig-* 'to enter': `` ' *dukȧ sȧmȧȧrii // sunšȋgȧȧ soojȧ* 'all the young men have become soldiers', *yaašȋgȧȧ ruwaa* 'he went into the water', *hakȋȋ // yaašȋgȧȧ ꞯidȯȯnaa* 'a grass got in my eye'. *cik-* 'to fill', *-aa* 'to be filled, fill': `` ' *naacȋkȧȧ guurȋȋnaa* 'I fulfilled my greatest ambition'; ` ' *yaacȋkaa* 'it's full'. *kul-* 'to care for': ` ' *kȕlaa dȧ šii* 'take care of him!', *naakȕlaa dȧ suu* 'I took care of them', *kadȧkȧkȕlaa dȧ šii* 'don't care anything about him!', *bȧmȕkȕlaa dȧ šii ba* 'we don't care anything about him', *ꞯiȟȧ kulȧȧwaa* 'I'm always mindful (of it)', *nii bȧnkȕlaa ba* 'I don't care'.

4.5.7. ` ` *-u*

` ` in all positions noted
This form is never transitive. It is not very common.

E.g. *gam-* 'to put together', *-u* 'to meet' (with: *dà*): *tàfì // gàmu dà šii* 'go meet him!', *mungàmu* 'we met', *mùgàmu* 'let's meet', say *mungàmu dà ʔàlfeeɲù* 'until we meet in fortunate circumstances!', *nii bàngàmu dà šii ba* 'I didn't meet him'. *taar-* 'to gather', *-u* 'to meet together': *suntàà ru // wani wajee* 'they met together someplace', *kùzoo // mùtàà ru* 'come (ye), let's meet together!'. *saam-* 'to get possession of', *-u* 'to take place': *yaasàà mu // kusaa dà ɣaanaa sʔakà* 'it took place near noon.'

4.5.8. ˋ ´ *-i*

ˋ ´ in imperative

ˋ ˋ or ˊ ˋ optionally elsewhere

This combination is rare. No transitive forms were noted.

E.g. *kʔoos-* 'to be full, mature', *-i* 'to be full of food': ˋ ´ *yaaci yaakʔòòši* 'he ate and became full'. *taf-* 'to depart, go': ˋ ´ *yaalàfì haʔʔàbàdaa* 'he's gone forever', *kaàtàfìʔ* 'are you going!', *tàfì // gàmu dà šii* 'go meet him!', *tàfì // dàfšeeši* 'go hit him in the mouth!', *yaagayàà manì // nii kadàʔìntàfì* 'he told me not to go', *yaàtàfì gàbammù* 'he's going to go in front of us'; ˋ ˋ *gizòò yaalàfì gìdansarkii* 'the spider went to the house of the king', *jùbìi nii naàtàfì gìdanjirgìi* 'the day after tomorrow I'm going to the railroad station', *wànì lòòkaciìnee // kaatàfì gìdaa jiyàà* 'what time did you go home yesterday?'.

4.5.9. ˊ ˋ *-ee*

ˋ ´ in imperative before noun object

ˋ ˊ in imperative otherwise

ˊ ˋ elsewhere

This form is very common and contrasts with ˋ ´ *-ee/-i* and ˊ ˋ *-aa* (see 4.3.1). It has intensive force in most cases.

E.g. *kwabʔ-* 'to release from': ˋ ´ *kwàbʔeeši* 'take it off!', *kwàbʔee manì gàà tarìi* 'take off (the head) from my axe'; ˋ ˋ *naakwabʔèèšì gà bʔootàà* 'I removed it from the handle', *kàkwabʔèèsù* 'release them!', *ʔallà kàkwabʔèè manì ʔaykìn//dà naasanì* 'God, keep me from doing what I know (is wrong)'. *rIf-* 'to cover': ˋ ´ *rìfèè raamìì* 'cover the hole!', *rìfèè bàà kinkà* 'shut your mouth!'; ˊ ˋ *kàrifèè raamìì wannàn* 'cover that hole!', *naarifèè ʔàsirinšì* 'I kept (covered) his secret'. *dwaadʔ-* 'to plug up a hole': ˋ ´ *dwàà dʔèè kʔoofàà* 'plug the hole!', ˋ ´ *dwàà dʔeeši* 'plug it up!'; ˊ ˋ *kaadwaadʔèèši* 'you have plugged it up'. *zaar-* 'to take one or more from a larger number': ˋ ´ *zàà rèè wannàn* 'take this one (out)!'; ˋ ´ *zàà reeši* 'take it (out)!'; ˊ ˋ *yaazaarèèšì* 'he took it out', *sunà zaarèèwaa* 'they are taking (some) out'. *ʔaz-* 'to place, put', *-ee* 'to leave, keep': ˋ ´ *ʔàjee manì wannàn* 'keep this for me!', *ʔàjeeši* 'keep it!'; ˋ ´ *naaʔajèèšì* 'I left it', *naàʔajèèšì* 'I'll leave (or keep) it', *naàʔajèè lìttaafìì* 'I'll keep the book', *kàʔajèè manì wannàn* 'keep this for me!', *ʔinà ʔajèèwaa* 'I'm keeping (it)'.

4.5.10. ˊ ˋ *-aa*

ˋ ´ optionally in imperative before *-ši* or noun object

ˋ ˊ in imperative otherwise

ˊ ˋ elsewhere

This combination is found with many two syllable verbs.

E.g. *duub-* 'to look': ˋ ´ *dùùbàà ši* 'look at him!', *dùùbàà bisà* 'look up!', *dùùbàà fuskàssù* 'look at their faces!'; ˋ ´ *dùùbaaši* 'look at him!', *dùùbaa tàmraaruwaa* 'look at the star!', *dùùbaa // dà kyaὺ // dʔankanòònee* 'look out well; he's from

Kano!'; ' ' *yaaduubàaši* 'he looked at him', *kàduubàa bàak²oo wannàn // dà kyaiʋ* 'look at that stranger well!', *kàduubàa // dà kyaiʋ* 'look well!', *šinà duubàawaa* 'he's looking'.    *bug-* 'to beat': ' ' *bùgàa yaaròò wannàn* 'beat that boy!', *bùgàaši gà kumcìi* 'beat him in the jaw!'; ' ' *bùgaaši* 'beat him!'; ' ' *yaabugàaši* 'he beat him', *naàbugàakà* 'I'll beat you', *yaabugàa dookìi* 'he beat the horse', *²inà bugàawaa* 'I'm beating (it)'.    *gam-* 'to put together', *-aa* 'to put together, finish': ' ' *gàmàa ²aykìi wannàn* 'finish this work!'; ' ' *kàwdàbàaraa // gàmaata dà goociyaa* 'combine a good-luck charm with dodging' (lit. 'a charm, put it with dodging'); ' ' *yaagamàasù fad²àà* 'he put them to fighting', *naagamàa* 'I've finished', *naagamàa ²aykìinaa* 'I've finished my work'.    *gwad-* 'to show, measure': ' ' *gwàdaaši* 'measure him!', *gwàdaa mašì* 'show him!'; ' ' *yaagwadàanì* 'he measure me', *yaagwadàa manì* 'he showed me'.

4.5.11. ' ` -u

' ` in all position noted

This form is never transitive and is not very common.

E.g. *mut-* 'to die': *yaamutù* 'he died'.    *hayf-* 'to bear (a child)', *-u* 'to be born, to bear (intr.)': *nii naahayfù // kàc²inà* 'I was born in Katsina', *²àkwiyàà // taahayfù // yaiʋ* 'the she-goat gave birth today'.    *saam-* 'to get possession of', *-u* 'to receive (something)': *kaasaamù* 'you have received (magical power)', *koomii kaasaamù // ²àduuniyàà* 'everything you have received in the world'.

4.5.12. ' ` -i

' ` in imperative

' ` elsewhere

This form is rare and most examples are intransitives.

E.g. *faad²-* 'to fall': *yaafaad²ì* 'he fell'.    *taas-* 'to rise': ' ' *tàaši* 'get up!'; ' ` *yaataaši s²àyee* 'he stood up', *naàtaaši* 'I'll get up', *bàytaaši bà* 'he didn't get up', *kadàkàtaaši* 'don't get up!'.    *fas-* 'to break', *-i* 'to be broken': ' ' *leeb²wànši // yaafaši* 'his lip cracked'.    *fad²* 'to tell', *-i* 'to tell (someone)': ' ' *yaajee yaafad²ì* 'he went and told (them)'.    *b²aat-* 'to spoil', *-i* 'to be spoiled': ' ' *yaab²aacì* 'he's spoiled'.

4.5.13. ' ' -ee

' ' In all forms recorded (imperative not recorded)

This form is very rare.

E.g. *gays-* 'to greet': *mungayšeeši* 'we greeted him', *naàgayšeeši* 'I'll greet him', *mùtàfi // mùgayšeeši* 'let's go and greet him!', *²àgayšeekà* 'bravo!'.

4.5.14. ' ' -aa

' ` in imperative (only recorded before *-ši*)

' ' elsewhere

This combination is rather rare.

E.g. *biy-* 'to pay': ' ' *bìyaaši* 'pay him!'; ' ' *yaabiyaanì* 'he paid me', *kàbiyaaši* 'pay him!', *kàbiyaa màynaamàà* 'pay the butcher!', *kadàkàbiyaa // dà yawà* 'don't pay too much!'.

4.5.15. ' ' -oo

' ` in imperative

' ' elsewhere

This is the most common of the formations with ' '.

E.g. *kaaY-* 'to bring', *-oo* 'to bring hither': ' ' *kàawooši* 'bring him here!'; ' ' *ʔin kaakaawoo naamàà* 'if you bring meat . . . ', *ʔallà šìkaawookà laafìyàà* 'God bring you back safely!', *kàkaawoo bèèlinkà gidaanaa* 'bring your flute to my house!'. *koom-* 'to return', *-oo* 'to return hither': ' ' *yaàkoomoo baayaa* 'he'll come back here', *yaakoomoo gidaa* 'he returned home (here)', *ʔìnkoomoo* 'let me return (here)'. *saY-* 'to buy', *-oo* 'to buy (and return here with)': ' ' *sàwoo naamàà* 'buy meat (and bring it back)', *sàwooši* 'buy it (and bring it back)', *nii naasawookì* 'I have bought you (f.)', *ʔin naàjee // nii naàsawoo wani ʔàbu* 'if I go, I'll buy something (and bring it back)'. *taf-* 'to depart', *-oo* 'to depart to come hither, to come': ' ' *yaatafoo* 'he came', *gàaši yaàtafoo* 'look, he's coming!'. *gan-* 'to see', *-oo* 'to see someone who is far off': ' ' *muntàfi // munganooši* 'we went and saw him', *kàjee // kàganooši* 'go and see him!'. *safk-* 'to descend', *-oo* 'to descend hither': ' ' *sàfkoo kʔasà* 'come down (here)', *sàfkoo naǹ* 'come down here!'; ' ' *yaasafkoo kʔasà dàgà tudù* 'he came down (here) from the hill'.

4.5.16. ' ' *-i*

' ' in imperative

' ' or ' ' elsewhere

No rule can be set up for the interchange of ' ' and ' ', though it does not seem to be at random. Some verbs are more frequently found with one rather than the other. E.g. *san-* 'know' usually has ' ', *gan-* 'see' usually has ' '.

E.g. *bar-* 'to leave': ' ' *farinwatàà // bàri gàasaa dà ɽaanaa* 'white moon, leave off vying with the sun!'; ' ' *kadàkàbarì* 'don't leave (it)!'; ' ' *yaabari gidaa* 'he left the house', *kàbari gàbaatà* 'leave your worry!'. *gan-* 'to see': ' ' *naagani gidaa* 'I saw the house', *mii kaagani* 'what did you see?', *nii bàngani ba jìrginkaayaa* 'I didn't see the freight train', *tàfi kusaa // kàgani* 'go up close and see!'. *san-* 'to know': ' ' *kay kaasanì // naasanìʔ* 'do you know I know?', *nii bànsanì bà* 'I don't know', *nii bànsanì koomii ba* 'I don't know anything'; ' ' *bàtàsani macìijii banèè* 'she didn't know he was a snake'.

4.5.17. ' ' ' *-aa*

' ' ' in all certain forms recorded

This form is rare and apparently occurs only with object implied. The object expressed equivalent is ' ' ' *-ee/-i*.

E.g. *tangaz-* 'to redirect', *-aa* 'to head off': *kàtàngazàà wani wajee* 'head (them) off somewhere!'. *kangar-* 'to be invincible': *yaakàngaràà* 'he's invincible'. *rinjaay-* 'preponderate' (BD), *-aa* 'to be off balance': *yaarìnjaayàà* 'it's off balance'. *gaagar-*, *-aa* 'become surly, out of hand' (BD): *yaagàagaràà* 'he's unmanageable'. *keeway-*, *-aa* 'to surround': *kùkèèwayàà* 'surround (it)!'.

4.5.18. ' ' ' *-ee/-i*

' ' ' in imperative before *-ši*, optionally before noun object anywhere

' ' ' elsewhere

This is a common form, occurring only with object expressed.

E.g. *ʔagaz-* 'to help': ' ' ' *yaaʔàgàjeenì* 'he helped me', *kàʔàgàjeenì* 'help me!', *kùʔàgàji gàjìyayyee* 'help the helpless!'. *ʔambat-* 'to mention': ' ' ' *yaaʔàmbàcì suunanši* 'he mentioned his name', *šinà ʔàmbàcì suunankà* 'he's mentioning your name'; ' ' ' *naaʔàmbàceeši* 'I mentioned him', *šinà sooǹ // šìʔàmbàceenì* 'he wants to mention me', *kadàkàʔàmbàceeši* 'don't mention him!'. *fatawt-* 'to trade':

` ` ` *yaafàtàwcì ʔàbù wannàn* 'he traded this thing'; ` ` ` *yaafàtàwceešì* 'he traded in it'.   *tambay-* 'to ask': ` ` ` *tàmbàyèèši* 'ask him!'; ` ` ` *yaatàmbàyi sarkii* 'he asked the king', *kàtàmbàyeešì* 'ask him!'.   *taymak-* 'to help': ` ` ` *wani bàytàymàkì wani ba* 'one doesn't help another'; ` ` ` *yaatàymàkeesu kàkkabʔàà* 'he helped them beat', *kàzoo // kàtàymàkeenì* 'come help me!'.   *sassakʔ-* 'to chip': ` ` ` *naasàssàkʔì ʔiccèè* 'I chipped the wood'; ` ` ` *naasàssàkʔeešì* 'I chipped it'.   *bʔalgat-* 'to break off a little piece from': ` ` ` *nii bàmbʔàlgàceešì bà* 'I didn't break a piece off it', *bʔàlgàci kàdʔan* 'break off a little', *naabʔàlgàci kàdʔan* 'I broke off a little'.

4.5.19. ` ` ` *-ee* and *-aa*

` ` `   in imperative before noun object

` ` `   in imperative otherwise

` ` ` `  before *-waa*

` ` `   or ` ` ` elsewhere (` ` ` more common)

Most verbs taking tri-tone patterns may have these combinations.

E.g. *kakkabʔ-* 'to beat', *-ee* 'to beat to knock something off a thing': ` ` ` *kàkkàbʔèè rììgakkà* 'brush off your coat'; ` ` ` *kàkkàbʔeeši* 'beat it (to knock something off it)!'; ` ` ` *kàkakkàbʔèè bangoo* 'knock (the cobwebs) off the wall!'; ` ` ` *kàkakkàb-ʔeeši* 'beat it!' (as above).   *ʔaykat-* 'to work (something)', *-aa*: ` ` ` *ʔàykàtàà ʔàbù wannàn* 'work this thing!'; ` ` ` *ʔàykàtaaši* 'work it!'; ` ` ` ` *ʔinà ʔaykàtaàwaa* 'I'm working (something)'; ` ` ` *naaʔaykàtàà* 'I worked (it)', *naaʔaykàtààšì* 'I worked it', *kùʔaykàtàà wannàn* 'work (ye) this!'; ` ` ` *kùʔaykàtaaši* 'work (ye) it!'.   *gilgiz-* 'to shake', *-ee* 'to shake an inanimate thing': ` ` ` *gìlgìjeeši* 'shake it!'; ` ` ` *naagìlgìjèèšì* 'I shook it hard'; *-aa* 'to shake an animate thing': ` ` ` *gìlgìzaasu kàdʔan* 'shake them a little!'; ` ` ` *kàree yaagilgìzàà mààgee* 'the dog shook the cat'; ` ` ` *naagilgìzaaši* 'I shook him', *yaagilgìzaa jìnkinšì* 'he shook himself'.   *šany-* 'to dry, drain', *-aa* 'to put out to dry': ` ` ` *šàñyaaši* 'put it out and dry it!'; ` ` ` ` *šinà šàñyaàwaa* 'he's putting (it) out to dry'; ` ` ` *naašàñyaaši* 'I put it out and dried it', *naàšàñyaaši* 'I'm going to put it out and dry it'.   *karant-* 'to read', *-aa*: ` ` ` *kàràntàà takàrdaa* 'read the paper!', ` ` ` ` *baàyà ʔiyàà karàntaàwaa* 'he can't read'; ` ` ` *yaakaràntàà* 'he read', *yaakaràntàà takàrdaa* 'he read the paper'; ` ` ` *kàkaràntaaši* 'read it!'.   *ʔaadan-, -aa* 'to put in safe keeping, keep': ` ` ` *ʔààdànaaši* 'keep it (safely)!', *ʔààdànaa manì wannàn* 'keep this for me!'; ` ` ` *kàʔaadànaaši* 'keep it (safely)!'.   *tankʔwas-* 'to bow', *-ee*: ` ` ` *tànkʔwàšee kàdʔan* 'bow down a little!'; ` ` ` *nii naatankʔwàšee* 'I bowed down'.

4.5.20. ` ` ` ` *-oo*

` ` ` ` in imperative (only noted with *-šì*)

` ` ` elsewhere

E.g. *tangaz-* 'to redirect', *-oo* 'to round up': ` ` ` *tàngàzoosù* 'round them up!'; ` ` ` *yaatangazooší* 'he rounded him up', *kàtangazoosù* 'round them up!', *kàtangazoo bisààšee* 'round up the animals!'.   *tattar-* 'to gather' (only recorded with *-oo*): ` ` ` *kùtattaroo* 'come meet together (for worship)'.

Examples of verb stems of four syllables are rare, but the following were noted:

4.5.21. ` ` ` ` *-ee*

*ʔazaabant-* 'to give someone a hard time': *yaaʔàzààbànceešì* 'he gave him a hard time', *kàʔàzààbànceešì* 'make it hard for him!', *ʔàzààbànceešì* 'make it hard for him!'.

4.5.22. ` ′ ` ′ *-ee, -aa.* Compare ′ ′ ` *-ee, -aa* 4.5.19.

*kararriy-* 'to break into little pieces': *naàkàrarrìyeeši* 'I'll break him to pieces', *yaakàrarrìyèèšì* 'he broke him into bits', *yaàkàrarrìyaaka* 'he'll break you to pieces', *yaakàrarrìyaašì* 'he broke him into bits'.

4.5.23. ′ ′ ` ′ *-ee*

*ragwaṛgwaz-* 'to break to pieces': *naàṛagwaṛgwàjeeši* 'I'll break him to pieces', *šinà ṛagwaṛwàjeeši* 'he's smashing him to pieces'. *ṛugurguz-* 'to be broken up': *yaadàfu // tay yaaṛugurgùjee* 'it cooked until it fell apart'. *ṛugurgud?-* 'to be broken to pieces': *yaaṛugurgùd?ee* 'it's broken to pieces'.

4.5.24. ′ ′ ` ′ *-ee, -aa.*

If *-riy-* in the following example be interpreted as *-ry-*, the pattern would be ′ ` ′. It is here considered a stem extended by the suffix *-iy-* and hence *-riy-* (4.2.3). *kakkariy-* 'to break (like a stick)': *yaakakkàrìyeeši* 'he broke him up', *yaakakkàrìyaašì* 'he broke him up'.[4]

---

[4] It should be added that the value of the longer examples is uneven as regards tone phrase juncture. Many have no junctures marked where checking would reveal several. In general there is a juncture before a verb (i.e. between adverb or noun subject and verb) and before an adverb or prepositional phrase after the verb.

# SPECIAL PUBLICATIONS

## VEDIC VARIANTS

MAURICE BLOOMFIELD and FRANKLIN EDGERTON, *Vedic Variants I: The Verb* (1930); buckram.................................... $3.50

BLOOMFIELD and EDGERTON, *Vedic Variants II: Phonetics* (1932); buckram ................................................. $6.25

BLOOMFIELD, EDGERTON, and M. B. EMENEAU, *Vedic Variants III: Noun and Pronoun Inflection* (1934); buckram........................ $5.50

## WILLIAM DWIGHT WHITNEY LINGUISTIC SERIES

E. H. STURTEVANT, *A Comparative Grammar of the Hittite Language* (1933); buckram.......................................... $4.50

E. H. STURTEVANT and GEORGE BECHTEL, *A Hittite Chrestomathy* (1935); buckram ................................................. $4.00

E. H. STURTEVANT, *A Hittite Glossary*, second edition (1936); in sheets, $2.50; paper covers, $2.75; buckram........................... $3.00

E. H. STURTEVANT, *Supplement to A Hittite Glossary, Second Edition* (1939)................................................. $1.00

EDUARD PROKOSCH, *A Comparative Germanic Grammar* (1939); buckram. $4.50

EDWARD SAPIR and MORRIS SWADESH, *Nootka Texts* (1939); buckram. $5.00

E. H. STURTEVANT, *The Pronunciation of Greek and Latin*, second edition (1940); buckram.......................................... $3.00

EDWARD SAPIR and HARRY HOIJER, *Navaho Texts* (1942); buckram. $5.50

E. H. STURTEVANT, *The Indo-Hittite Laryngeals* (1942); buckram........ $2.25

## MISCELLANEOUS

G. C. S. ADAMS, C. M. WOODARD, U. T. HOLMES JR., *A Census of French and Provençal Dialect Dictionaries in American Libraries* (1937)... $0.50

R. A. HALL JR., *Bibliography of Italian Linguistics* (1941); buckram. $7.50

LEONARD BLOOMFIELD, *Outline Guide for the Practical Study of Foreign Languages* (1942)........................................... $0.25

BERNARD BLOCH and G. L. TRAGER, *Outline of Linguistic Analysis* (1942)................................................. $0.75

R. A. HALL JR., *Melanesian Pidgin Phrase-Book and Vocabulary* (1942).. $0.50

R. A. HALL JR., *Melanesian Pidgin English: Grammar, Texts, Vocabulary* (1943).............................................. $2.50

G. M. BOLLING, *The Athetized Lines of the Iliad* (1944); buckram. $4.00

R. G. KENT, *The Sounds of Latin*, third edition (1945); buckram. $4.00

R. G. KENT, *The Forms of Latin* (1946); buckram................. $4.00

The price for current volumes of Language is net; subscription agencies may charge their clients a commission of one dollar per annual subscription.

A complete list of the publications of the Linguistic Society of America may be secured from the Secretary.

# PUBLICATIONS

*of the*

# Linguistic Society of America

Complete regular publications, 1925 to date, including
 LANGUAGE and Supplements: per annum............... $5.00
LANGUAGE, separate numbers: each....................... $1.50

As Supplements to LANGUAGE, the Linguistic Society of America
issues two series of occasional publications, LANGUAGE MONOGRAPHS
and LANGUAGE DISSERTATIONS. These are included in the subscrip-
tion price of the journal, but may also be purchased separately. A
complete list of titles and prices may be secured from the Secretary
of the Society.

## LANGUAGE MONOGRAPHS

In this series the Society publishes studies too long to appear as
articles in the journal LANGUAGE.

## LANGUAGE DISSERTATIONS

In this series the Society publishes dissertations which have been
accepted for the degree of Doctor of Philosophy in American uni-
versities, provided that in the Editor's opinion the dissertations are
upon linguistic subjects. The Society does not pass upon the
scholarly merit of the dissertations nor upon the validity of their
conclusions.

The method of application for admission to either of these two series,
and the terms of publication, may be secured from the Secretary of
the Society.

## SPECIAL PUBLICATIONS

In addition to its regular publications (the journal LANGUAGE and
the two series of Supplements named above) the Linguistic Society of
America issues from time to time SPECIAL PUBLICATIONS in the field
of linguistic science. These are not included in the subscription
price of the journal, but may be purchased at a discount by members
of the Society. Titles and prices are listed in full on the inside
back cover.